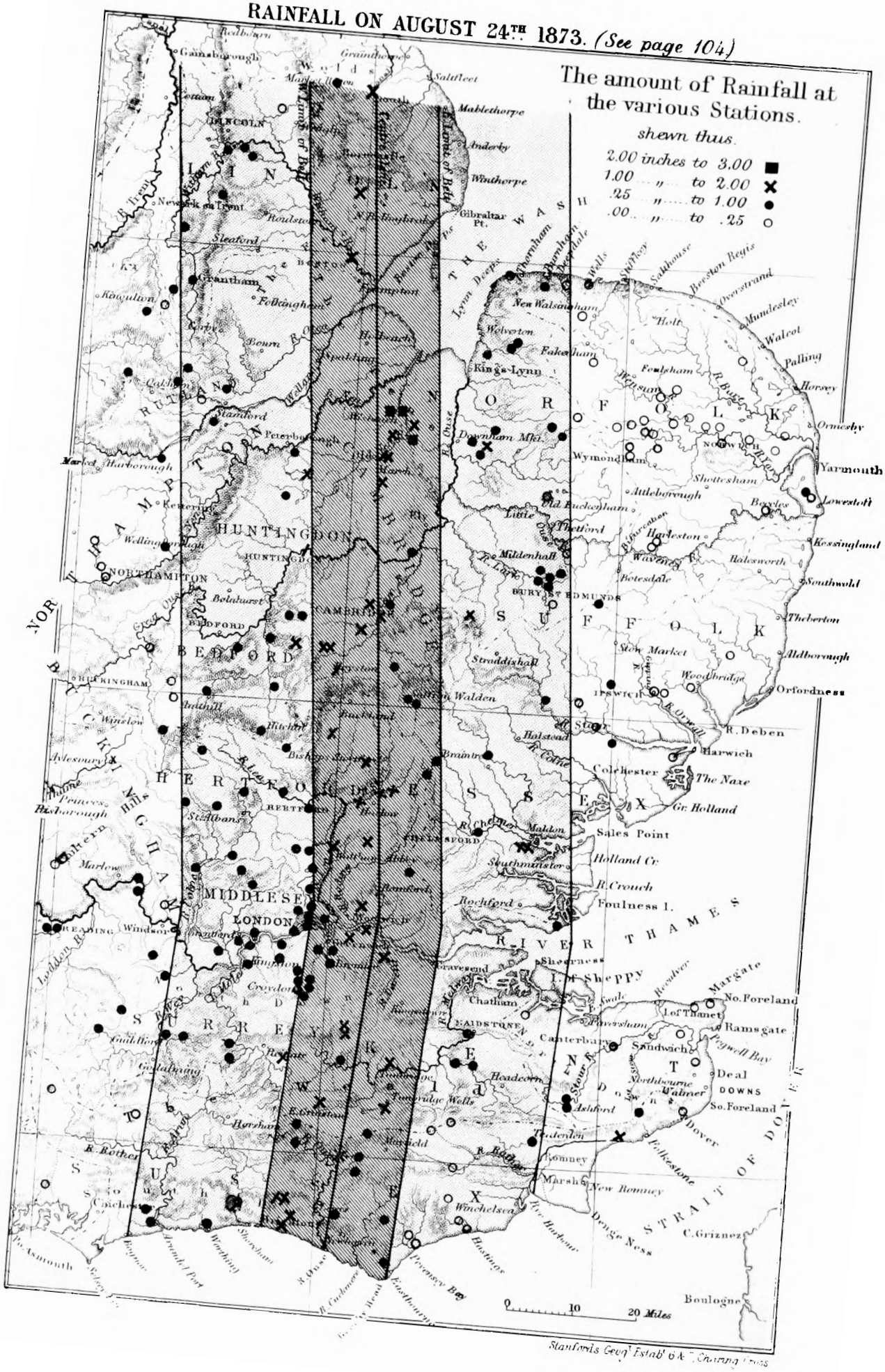
RAINFALL ON AUGUST 24TH 1873. (See page 104)



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BRITISH RAINFALL, 1873.

ON

THE DISTRIBUTION OF RAIN

OVER THE

BRITISH ISLES,

DURING THE YEAR

1873,

AS OBSERVED AT ABOUT 1700 STATIONS IN GREAT BRITAIN AND IRELAND,

WITH MAPS, AND ILLUSTRATIONS.

COMPILED BY

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CONTENTS.

PREFACE 5
REPORT 6
SUN-SPOTS AND RAINFALL 7
MEASUREMENT OF SNOW 8
THE RAIN GAUGE QUESTION AT VIENNA 9
SCOTCH MIST, by the Rev. F. W. Stow, M.A., F.M.S. 10
RAINFALL OF 1873 IN THE COUNTY OF HEREFORD, by the Rev. N. Stephenson. 25
TERMINATION OF THE RAIN GAUGE EXPERIMENTS AT ROTHERHAM 28
RAIN GAUGE EXPERIMENTS AT BOSTON RESERVOIR, ROTHERHAM, by R. Chrimes, Esq. 29
RAINFALL AT THE ROYAL OBSERVATORY, GREENWICH, by J. Glaisher, Esq. F.R.S. 31
RAIN GAUGE EXPERIMENTS AT ALDERSHOT CAMP, HAMPSHIRE, by Colour-Serjeant J. Arnold, A.H.C., F.M.S. 32
CHRONICLE OF NEW STATIONS ESTABLISHED, AND CHANGES IN THE PERMANENT STAFF OF OBSERVERS DURING THE PAST YEAR 33
ON THE SERIES OF OBSERVATIONS ESTABLISHED IN THE WATERSHED OF CONISTON LAKE AND ITS VICINITY, by the late R. T. Bywater, Esq. ... 48
OBITUARY 50
ON THE METEOROLOGY OF 1873, WITH NOTES ON SOME OF THE PRINCIPAL PHENOMENA 53
OBSERVERS' NOTES ON THE MONTHS OF 1873 66
OBSERVERS' NOTES ON THE YEAR 1873:— ... ...
England 86
Wales 95
Scotland 95
Ireland 96
HEAVY RAINS OF SHORT DURATION 99
THE PRINCIPAL HEAVY RAINS OF 1873 101
MAXIMUM FALLS IN 1873 111
ON THE MONTHLY FALL OF RAIN IN THE BRITISH ISLES DURING 1873 ... 115
TABLES OF MONTHLY FALL 118
" " " PER-CENTAGE OF RAINFALL IN 1873 124
ABSTRACT OF THE MONTHLY TABLES 128
EXTREMES OF RAINFALL IN 1873 129
ON THE RAINFALL OF THE BRITISH ISLES DURING THE YEAR 1873 130
COMPARISON OF THE FALL IN 1873 WITH THE AVERAGE OF PREVIOUS YEARS 132
REMARKS SUGGESTED BY AN EXAMINATION OF THE GENERAL TABLES, AND BY COMPARISONS OF THE TOTAL RAINFALL IN 1872 AND 1873 134
EPITOME OF RAIN RETURNS FROM THE LAKE DISTRICT 143
SUGGESTIONS FOR SECURING UNIFORMITY OF PRACTICE AMONG RAINFALL OBSERVERS 147
ARRANGEMENT OF GENERAL TABLES 150
COUNTY INDEX TO GENERAL TABLES 151
GENERAL TABLES OF TOTAL RAINFALL IN 1873 AT ABOUT 1,700 STATIONS IN THE BRITISH ISLES:—
England 152
Wales 178
Scotland 182
Ireland 192
FINANCIAL 195
SUPPLEMENTARY TABLE OF IMPERFECT RETURNS 198
LIST OF STATIONS OF WHICH THE RECORDS WERE QUOTED IN 1872 BUT ARE NOT IN 1873, WITH THE REASONS FOR THEIR OMISSION 200

ERRATA IN "BRITISH RAINFALL, 1872."

Page 59.—April 15th. Omit "and on 20th at Forest Hill,"
,, 61.—June 18th. Watford, for 1·52 read 1·42.
,, 65.—August 3rd. The Forest Hill note refers to September 3rd.
Large folding table facing page p. 140 (out of 900 entries one is incorrect) Div. V. Helston : the difference from average was 36 per cent., not 37 per cent.
Page 159.—Croydon, Dingwall Road. The return was incorrect, for 35·46 read 35·36.
,, 161.—East Sussex. For Warble*d*on read Warble*t*on.
,, 175.—Southwell. "28·84 ?." Erase the return.
,, ,, Retford. "30·79.'; This amount is remarkably small, add ?
,, 184.—Great Strickland. For 59·19 read 59·16.
,, 193.—Lawrencekirk. For 49·63 read 49·73.
,, ,, For "Tilly*pron*ie" read "Tilly*four*ie."

ERRATUM IN "BRITISH RAINFALL, 1873."

Page 20.—Headline. For *Aysgarth* read *Seathwaite.*

BRITISH RAINFALL, 1873.

Success is by no means a necessary result of efforts to secure it. Although, therefore, with each consecutive year I have adopted additional precautions against any errors either of observation or computation creeping into this work, it by no means follows that I shall continue to be as successful in keeping them out as I have hitherto been; in fact, in spite of every care, it is hardly reasonable to hope for a continuance of such remarkably small tables of errata as there have been of late years.

I should be glad if the publiction were earlier in the year, but there are usually nearly *two hundred* of my correspondents whom I cannot induce to forward their returns until three months after the close of the year, and in their absence it is most difficult to complete any portion of the work. In fact in one respect they compel an imperfection which probably no one notices but myself. In order to publish at the earliest practicable date, the various separate articles are prepared and finished off as fast as possible, but meanwhile fresh records come in, and often an entry occurs in one article which, under some other form, should appear also in another, for which however it was too late.

Every effort is used both by myself and my assistants to secure accuracy, and to render this publication worthy of the position which it occupies, and I venture to hope that our object has been achieved.

G. J. SYMONS.

62, Camden Square, N.W.
April 27th, 1874.

REPORT.

THE steady growth of Rainfall work continues, but the increase is that of greater rigour in even the smallest details, and in using every effort to ensure the nearest possible approach to accuracy rather than in that wide-spread search for observers which was indispensable at the establishment of our system, when areas larger than three or four English counties were without any records at all, and when the stations in Wales or in Ireland could be counted on one's fingers.

That the geographical distribution of our stations is still far from perfect will be seen from the chronicle of changes in each county, which I have compiled in accordance with the wish of several correspondents. It is most desirable that these remaining interstices should be promptly filled up, and I shall be much obliged to all who will assist in so doing.

As completeness rather than mere number has always been my aim in organizing the rainfall staff of this country, I have never thought it worth while to determine the number of stations or the increase or decrease thereof. On the other hand, no effort is spared, no labour thought too great, nor (as far as funds permit) cost begrudged, which will in any way tend to improve the quality of the observations, or the proper distribution of stations throughout the country.

I much regret that the request which I made last year (*British Rainfall*, 1872, p. 40,) that "one or two gentlemen in each county would have the kindness to volunteer to assist, as far as may be in seeing, that their county is not neglected," has only been acted upon in a very few cases. The following are the only gentlemen who, up to the present time, have offered their assistance :—

Sussex.....	F. E. Sawyer, Esq., F.M.S.	Buckingham place, Brighton
North Hants...	Rev. C. H. Griffith, F.M.S.	StrathfieldTurgiss Winchfield
Cambridge.....	S. H. Miller, Esq.,F.R.A.S., F.M.S.,	Observatory, Wisbeach
Norfolk	Rev. J. M. Du Port, M.A.....	Mattishall, E. Dereham
Hereford.....	Rev. Nash Stephenson, M.A.	Bromyard
N. Lancashire..	The late R. T. Bywater, Esq.	Lanchead, Coniston
N. Yorkshire...	Rev. F. W. Stow, M.A., F.M.S. ...	Aysgarth, Bedale
Denbigh..	Whitehall Dod, Esq.	Llannerch, St. Asaph

Every one of these gentlemen has done good work, some of it will

be found recorded in the chronicle, page 33 *et seq.*; other illustrations will be found in the article on the Rainfall of 1873, in the county of Hereford, by the Rev. Nash Stephenson, and in that of which, alas, the compilation has devolved upon myself, respecting the new stations in North Lancashire, organized by the late Mr. Bywater. Even more important, however, are the unrecorded details of mutual communication between observers, tending to reciprocal benefit, increased interest in the subject, greater uniformity of proceeding, and greater accuracy. The beneficial results have far surpassed my expectations, and I sincerely hope that the example which these gentlemen have so kindly set will be imitated by many others.

I do not wish to say much respecting my own share in the work; but thanks are due to those subscribers who, by enabling me to retain my assistant, have enabled me not only to keep pace with current details, but to take up some branches of rainfall work the prosecution of which had necessarily been postponed.

I am also glad to say, that although the correspondence has further increased, and is now extremely heavy, all arrears are being rapidly cleared off, and I venture to hope that with a further increase in my staff during the present year, all anxiety on this score may be removed. Some persons may think that word "anxiety" inappropriate; let them imagine that on a given day they have arranged to effect some special object, and that when the morning comes the postman brings ten or fifteen letters, each requiring their own separate and special thought. If these letters are attended to first, the contemplated object cannot be effected, if they are put aside, one is conscious that they are waiting, that each succeeding day will add to the pile, and that meanwhile the writers are naturally surprised at receiving no reply.

SUN SPOTS AND RAINFALL.

The state of the discussion respecting the supposed connexion between sunspots and rainfall remains very nearly where it was last year. Mr. Meldrum has continued his search for long registers, and still finds confirmatory evidence, which he has published in the *Monthly Notices* of the Meteorological Society of the Mauritius. Few other Meteorologists have taken up the subject; possibly some are afraid of the labour it involves. This, moreover, is seriously augmented by Mr. Meldrum having* shifted the epochs of two of

* *Nature*, Vol. VIII., p. 547.

his maxima years, which would involve the recomputation of all the tables upon this subject in *British Rainfall*, 1872, and also of a large portion of those by Dr. Jelinek. The pressure upon both our time and space prevents the re-opening of the subject in these pages at present.

MEASUREMENT OF SNOW.

The comments which we received respecting the article upon this subject in our last volume were singularly uniform, only two suggestions meeting with any advocates, viz., (1) that a tin cylinder of the same diameter as the rain gauge, but without a funnel, should be kept close to the rain gauge, and in winter be regularly emptied; when snow has fallen, or snow mixed with rain, the amount in this cylinder should be taken instead of that in the ordinary rain gauge. (2) The other method which meets with approval, is the general adoption of the Snowdon pattern for all stations, and at all times. Respecting this suggestion we remarked that—

"We see no objection to this, except the increased surface to be wetted. Fresh and careful experiments as to the amount of loss thus caused, and the gain in snowy weather, are desirable."

We are indebted to Colonel Ward for an answer to this question as far as winter experiments in Switzerland are applicable to the British Isles—for we hope that such large differences could not be found in the United Kingdom—the totals for five months are—

1873.	Rain Gauge.	Snow Gauge.
	1ft. 6in. above ground.	
October	1·415	2·085
November	4·250	4·650
December	0·830	1·100
1874.		
January	0·750	1·110
February	0·200	0·500
	7·445	9·445

and the Colonel, in a recent letter, remarks on the Snowdon pattern gauge:—

"I consider it the best form of rain gauge for this reason: in rain it and the

one with the low rim to the funnel, work exactly together; in snow, especially with wind at the same time, the low-rimmed funnel is useless."

It certainly appears to us that similar *comparisons* should be instituted in several places, so as to test the loss by summer heat and the gain during winter snow.

It is scarcely necessary to point out that the new pattern must in no case be taken into use for the permanent record until Rule II. has been strictly complied with.

THE RAIN GAUGE QUESTION AT VIENNA.

I always regret any difference of practice among Meteorologists even more than diversity of opinion; but I cannot recommend British observers to adopt the conditions of rainfall observation laid down at Vienna. The Leipzig meeting having partially suggested the employment of very large gauges, high above the ground, I forwarded to Vienna an epitome of the experimental results obtained by Col. Ward and others, and concluded with the following remarks :—

"The recommendation that all gauges should be 14 inches (0·36m.) in diameter, and 8 ft. 2 in. (2½ metres) above the ground, appears inexpedient for the following as well as other reasons :—

1. A gauge so placed will collect nearly 7 per cent. less than the true rainfall reaching the surface of the ground, and the advantage gained by so great an elevation is not obvious.
2. The use of a gauge having so large a receiving area possesses no advantage over that of one having one-fourth of the area.
3. So large a gauge does not accord with the suggestion of Dr. Mohn to the Leipzig meeting, nor with the practice of this country, of France, America, India, or Australia, in which countries, collectively, about 5000 gauges are in operation, very few of which exceed 8 in. (0·20 m.) in diameter, or 3 ft. (say 1 m.) above the ground."

I fear that this note having been sent in English, and not translated, has prevented the whole of the delegates realizing the facts of the case, for they have recommended a gauge, a monument of the unsuitability of which still stands in utter ruin on the summit of Helvellyn. The recommendation is also insufficiently definite, as the only data are—diameter 14 inches, height above ground 3 ft. 3 in. to 4 ft. 11 in.

It appears to me that, as for many reasons we cannot adopt this pattern generally, the only course will be for a few gentlemen to obtain gauges of this kind *in addition to* their present ones, and, if so, I will print the records separately, so as to be available for International purposes.

SCOTCH MIST.

By the Rev. F. W. Stow, M.A., F.M.S.

My object in this short paper is to point out some peculiarities in the rainfall of hilly districts as compared with that experienced at ordinary stations. "Scotch mist" is a name which has been given to that fine rain which is of such frequent occurrence in hilly country. It is by no means always a mere drizzle, although frequently so in the more eastern parts of a hilly district, and the fact that it is proverbially deceptive and wets you much more than you expect, proves that even to the eye of the inexperienced observer it is peculiar in character, and not to be confounded with ordinary rain. It is not absolutely confined to mountain districts, but under certain conditions extends quite across the country. This generally happens in winter, especially during a thaw, and if it occurs in summer it is often followed by hot weather. It generally comes with a southerly or south-westerly wind, but on the east coast it is common enough when the wind has shifted, and brings in a mild moist atmosphere from the sea. Even when it is heavy, it preserves its distinctive appearance. The tremendous downpours which occur at the English lakes, in Wales, and the western highlands of Scotland, and the thunder rain which produces heavy falls in level country, are for the most part as unlike to the observant eye, as they are distinct in their origin, and the mode of their production.

It occurred to me that it might be of advantage to examine the falls exceeding an inch at Seathwaite, setting them side by side with the amounts registered on the same day at more easterly stations, and on the other hand to set the falls which amounted to a third of an inch at the latter beside those at more westerly stations. In both cases I have obtained certain meteorological conditions from the curves for Stonyhurst, in the invaluable Quarterly Reports of the Meteorological Office—viz. the change in the dry bulb during the rainfall day from 9 a.m. to 9 a.m., and from midnight to midnight, as well as the direction and velocity of the wind.* My reason for taking the change

* The Quarterly Reports for the last three quarters of 1873 are not yet published. For the last quarter I have been able to use my own observations at Aysgarth, substituting the change from 9 p.m. on the previous day to 9 p.m. for that from midnight to midnight, and the direction and estimated force of the wind at 9 p.m. for the general direction and maximum velocity.

from midnight to midnight was, that I presumed that some little time was required for changes of temperature to produce their effect, and therefore the change a few hours before the time of rain might be more important than that which occurred simultaneously with it. Moreover, for obvious reasons the temperature of the air very frequently declines after the rain is over, and it is quite common for an increase of temperature to precede or accompany rain when the whole change from 9 a.m. to 9 a.m. has nevertheless a *minus* sign. On this account the tables I have drawn up necessarily fail in some cases to shew the real conditions at the time of rain, or just previously to its commencement, and it must often happen, also, that the conditions shown at Stonyhurst very imperfectly represent the actual meteorological state of the Cumberland mountains, or of the bleak plain of the neighbourhood of Durham. Nevertheless some facts come out very distinctly in the accompanying tables for 1872 and part of 1873.

1. Falls exceeding an inch at Seathwaite are often wholly unfelt beyond the hill country, and the average recorded on those days at Durham, is only from $\frac{1}{6}$th to $\frac{1}{20}$th of that which fell at Seathwaite.

2. Falls amounting to a third of an inch and upwards at Durham and Greta Bridge, are often unfelt at Seathwaite, and on an average, less rain is experienced on those days at Seathwaite than at Durham.

3. Falls exceeding an inch at Seathwaite almost always occur with southerly or south-westerly winds, especially if the wind is high.

4. Falls amounting to a third of an inch and upwards at Durham and Greta Bridge, less frequently occur with south-west winds, but usually with N.E. or S.E. winds, or on days on which a change of wind occurs.

5. Certain heavy falls of rain are felt both at Durham and Seathwaite, and a reference to the Daily Weather Reports almost always shows these to be general over a considerable district, and to occur simultaneously with conflicting winds, and irregular disturbances of the atmosphere.

6. Falls exceeding an inch at Seathwaite are of several classes:—

(*a.*) General or thunder rains, apparently unaffected by the mountains.

(*b.*) General rains exaggerated during a part, at least, of their continuance, by the presence of the conditions necessary for mountain rain. This in 1872, was of very frequent occurrence.

(*c.*) Mountain rains occurring almost invariably with south-westerly winds *and an increase of temperature.* These were common in 1872, and still more so in the last quarter of 1873.

7. Falls amounting to a third of an inch at Durham and Greta Bridge, are also of several classes.

(*a.*) General or thunder rains.

(*b.*) Rains occurring with N.E. winds, and an increase of perature, apparently possessing the character of mountain rains.

(*c.*) General rains exaggerated by the presence of conditions necessary for (*b.*)

It would seem that *increase of temperature* is a necessary condition of genuine "Scotch mist," provided that that increase be accompanied by an increase in the vapour tension. This is not the case in settled fine weather, when the increase is due solely to the sun's rays, but is very noticeable when a moist wind comes in from the sea, and to a less extent when during unsettled weather, a sunny morning has converted mist and mist-cloud into invisible vapour, and has loaded the atmosphere with water from the wet ground.

Hill tops, it is certain, must become on a calm and clear night several degrees colder than the surrounding atmosphere at the same height. They may be warmer than the valleys into which an immovable cushion of cold heavy air has settled. But they must still be colder than the air at the same height, and no sooner does a breeze spring up in the morning than they are clothed with cloud, though in the stiller night they may have remained clear. The breeze increases, coming in from the neighbouring sea unaffected by the night-cold of the land. It passes over the low lying districts, only gradually rubbing away the cold air which lies over them and condensing as it mixes with it a small part of its own vapour into cloud, and, perhaps, gentle rain. But when it strikes the hills it does not get off so easily. It cannot pass away without passing over them, it is forced up the slopes and made to feel their cold, entangled in gullies, whirled round and round in eddies on the lee of the summits, and soon parts with a large portion of its vapour in a heavy and continuous fall of dense small rain. Some of the small drops as they fall clash and combine; and if the mountains are high, the drops may be large before the rain reaches the valley behind. In this country the mountains are low, and the rain preserves to a great

extent the character of "Scotch mist." In Switzerland I believe it is otherwise, the mountain rain-clouds being there as high as ordinary rain-clouds, and frequently much higher. But I have been too fortunate in weather there to be able to speak positively on this point.

No doubt the fact of the moist wind being pressed up to a higher level, and its consequent expansion, hastens its cooling; but the main cause is this: the wind is warm, and the hills are cold.

A steady warm S.W. wind after cold weather will cause nearly continuous rain at the Lakes day after day, as no doubt it takes some time before the hills acquire the temperature of the wind, and if the rain begins to flag, a single cold clear night will again disturb the equilibrium, and put the condenser again in proper order. But as a rule it does not rain continuously, though it may rain every day, but clears off at night and sets to work again with the next increase of temperature. A shift of the wind to N.W. or N. with decreasing temperature always puts a stop to "Scotch mist," but on the north-east coast a shift to the northwards often brings a milder air in from the sea, and it rains or snows fiercely while it is clear and frosty inland. With the wind in the N.E. it seldom rains much at Seathwaite, because more easterly ranges have got all the "Scotch mist," and because east winds, besides containing less moisture, do not die down at night, and permit the same inequalities of temperature which prevail with westerly winds. Hence the mountain is little colder than the wind and no condensation takes place unless the rise of temperature is rapid; and, of course, if it declines, as it often does, the mountains become then warmer than the air, and act as cloud dispellers. Settled summer weather has the same effect, the mountains become hot and the rain clouds which pass over the plains are dissipated by them.

Perhaps I have said enough to make the readers of the annual wish for an observatory several thousand feet above the sea, as without a knowledge of the temperature and other conditions at a considerable height, mountain rains cannot be properly investigated, or much known of the laws of meteorology generally.

I will only presume to guess that falls of rain are of three classes. Some rains result from the mixture of warm and moist air with a body of cold air resting on the ground; others from that of a cold upper current with a similarly subjacent warm stratum. The third class are cyclonic rains, resulting, I suppose, from the mixture of contending warm and cold currents. In this case the temperature near the ground is usually affected first by one and then by the other.

In the first case, that of *equatorial rains* as I will venture to call them, I imagine that the admixture generally takes place slowly, because the lightness of the newly-arrived warm current allows it for a time to pass over the subsisting cold stratum, and condensation is not rapid, unless it encounters a mountain range. Still, if the warm current be very moist and much warmer than a large body of cold air which it encounters, there may be very considerable and general precipitation, but there will always be much more in hilly country, because the conditions are those most favourable for "Scotch mist." The only distinction between equatorial rains and mountain rains is that in the hills the warm current encounters a fixed condenser, whereas over the plains it is only or chiefly a body of cold air which causes condensation, and this gets blown away before very long.

The second class, that of *polar rains*, is different. Kaemtz long ago showed from observations taken on the Faulhorn (about 9,000 ft.) that when a thunderstorm occurs at or below that level, the air on the summit is intensely cold, and it usually snows, although the heat in the valleys is often intense. This seems to indicate the sudden arrival of a cold polar current in the upper atmosphere, while the lower regions are still occupied by a body of warm or hot air. It is easy to see what the result must be. The two bodies of air are in unstable equilibrium: the one tends strongly to ascend, the other to descend. For a short time equilibrium may continue, and the solar rays finding little obstacle in the cold air above are intensely powerful. But soon disturbance ensues, up goes the warm air, and down streams the cold, heavy polar current. The two mix rapidly, violent precipitation ensues, while the opposite electrical states of the contending bodies of air frequently give rise to thunder and lightning. If the polar current is very cold probably hail will fall. Such conditions are frequent in our islands, and were so to a remarkable extent in the south of England during the summer of 1872. As the polar current passes over the cool sea comparatively little disturbance ensues, and it probably rains only moderately in the Orkneys, and even in Scotland. You cannot get far from the sea there, and, moreover, the air over hilly country is often but little heated owing to the mists which envelope the mountains. At all events it is a fact that the summer temperature of Scotland is very inferior to that of England. So that it is easy to account for thunderstorms being less frequent in the north and west of our islands.

But when the polar current arrives over the heated plain of the

Midland Counties, the conditions which I have described are realized, and a violent thunderstorm is the result. No doubt many other sudden and heavy rains, though unaccompanied by thunder, belong to the same class. One of the surest marks of such rains is, that they are followed, generally within twelve hours, by a shift of the wind towards the N., and a fall of temperature.

The third class, that of *cyclonic* rains, were very frequent in the earlier and later months of 1872. They usually begin with a S.E. or S. wind and increasing temperature, the barometer at the same time falling. Presently the wind shifts to the S.W., W. or N., sometimes suddenly, sometimes after a lull, and the temperature falls. The rain is generally heaviest just before the change of wind, when no doubt the contending currents are already mixing rapidly above, and is sometimes accompanied by thunder and lightning. But as the first part of the cyclone gives the conditions for mountain rains, we generally find that they are accompanied by very heavy falls at Seathwaite, which took place, there can be no reasonable doubt, almost wholly *before* the change of wind, and in the *equatorial*, not in the *polar* half of the storm.

I have attempted, in the accompanying tables, to distinguish these different classes of rainfall. Equatorial rains are marked E; polar P; and cyclonic C. But I do not pretend to have done it with certainty.

In conclusion, let me apologize for the imperfections of this paper, which want of time has necessitated. I could not spare time to use a microscope upon the beautiful little Stonyhurst curves, and consequently may often have made mistakes. It seems a pity that the dew point is not given instead of vapour tension, as the scale for the latter is too minute to admit of my giving it in figures, as I would gladly have done. Still I hope that the tables will be found interesting, and that whatever errors I may have fallen into will meet with indulgence. Particulars about the gauges and stations will be found in the regular Rainfall Table. Reagill, I should add, is in the parish of Crosby Ravensworth, in Westmoreland, not far from Shap, and 900 feet above sea level.

Falls exceeding an inch at Seathwaite.

1872. DATE.	Fall of Rain at				At Stonyhurst.				Whether Equatorial (E), Polar (P), or Cyclonic (C).	NOTES (APPLYING TO STONYHURST).
					Temperature.		Wind.			
	Seathwaite.	Reagill.	Greta Bridge.	Durham	Change Mdnght to Mdnght	Change 9 a.m. to 9 a.m. nxt. day	Direction.	Greatest velocity approx.		
	in.	in.	in.	in.	°	°		miles.		
Jan. 1	1·76	0·88	0·16	0·05	+ 4	— 3	S., S.W.	40	C	Max. temp. about 3 p.m., 45° ; sudden fall of temp. at 8 p.m. with heavy rain
3	1·26	0·51	0·	0·15	+ 3	+ 1	S.W., S.	50	C	Max. at 4 a.m., on 4th, when gale at its height, R heavy, then temp. fell suddenly
4	1·41	0·80	1·00	0·25	0	+ 2	W., S.	25	C	Max. about midnight, R 5 p.m. to 4 a.m. with rise, and from 5 to 7 a.m. on 5th, with sudden fall of temp. at 6 a.m.
10	1·12	0·27	0·18	0·28	+ 8	+15	N., S.	15	C	Wind changed at 9 a.m. 10th, max. 9 a.m. 11th
12	1·18	0·33	0·	0·10	+ 2	+ 9	S.S.W.	30	E	Max. at 9 a.m. 13th
13	3·45	1·15	0·	0·04	— 1	— 6	S., S.W.	40	C	Max. at 3 p.m., 51°, temp. then fell
16	2·89	0·50	0·	0·10	+ 1	+ 6	S.S.W.	30	E	Max. at 9 a.m. 17th, 43° ; min. on 16th, 30°
17	5·82	2·00	0·22	0·	+ 9	0	S.	50	E	Max. at 11 p.m. ; gale—worst at midnight
28	1·40	0·06	0·	0·01	+ 2	+ 4	S.	25	E	Wind changed to S. about noon ; max. at 9 a.m., 29th
29	4·27	0·54	0·08	0·35	+ 9	+ 4	S.	40	E	Max. at 6 p.m.—up to 50° all night
Feb. 1	1·18	0·33	0·23	0·16	+ 1	+ 3	S.	40	C	Temp. 50° till 3 p.m., slight R at noon and again at midnight with gale
3	1·11	0·23	0·19	0·05	+ 4	+ 3	S.	40	E	Warmer from 3 p.m. to 2 a.m.
10	1·15	0·30	0·05	0·	+ 2	0	S.	20	E	Max. 52° at 2 p.m.
17	1·10	0·51	0·29	0·16	+ 5	+ 1	S.W.	20	C	Temp. rose till 4 p.m. ; R 8 p.m. to midnight, and again with fall of temp. 3 to 6 a.m., 18th
19	1·44	0·47	0·	0·01	0	+ 2	S.W.	20	E	Max. 51° at Kew
23	1·77	0·48	0·18	0·27	— 4	+ 4	S., S.W.	10	C	Max. about 2 p.m.
24	1·59	0·73	0·43	0·96	+12	+ 4	S.S.W.	20	C	Max. about 2 p.m., and continued at 50° till 5 a.m. 25th, then fell suddenly

Feb. 28	2·00	0·23	0·02	0·02	+ 2	+10	S.S.W.	20	E	Max. at 9 a.m., 29th
29	1·42	0·13	0·06	0·08	+ 7	0	S.W.	25	E	
Mar. 17	1·98	0·38	0·01	0·12	— 5	— 5	S.W.	25	C	Temp. risen from 6 a.m. on 15th; warm wind got up about noon on 17th, lasted 4 hours, then colder
27	1·13	0·75	?	0·39	+10	+ 8	S.	35	C	Temp. rising fast with southerly wind, but falling in Scotland from noon
28	1·36	0·48	?	0·31	+ 5	+ 7	S.W.	35	E	Temp. above 50° from 4 p.m.
29	1·85	0·55	?	0·29	+ 2	0	S.S.W.	25	E	Temp. above 50° nearly all day
April 7	1·48	0·14	0·17	0·12	+ 7	+ 4	S.	30	E	A little R generally
May 3	2·39	0·43	0·	0·13	+ 3	— 8	S.W.	25	C	General rain—storm centre over Scotland
4	2·11	0·42	0·30	0·04	0	+ 2	S.W.	35	C	General rain—R fell at Stonyhurst while it increased 6°
7	1·50	0·35	0·10	0·67	+ 2	+ 4	S.W.	30	C	General rain—winds N. in Scotland, S.W. in England
29	1·29	0·09	0·	0·	0	— 2	S.W.	25	C	Temp. rose fast up to 3 p.m. with S.W. wind
June 10	1·22	0·35	0·05	0·09	+ 3	+ 3	W.S.W.	20	E	General rain—wind backing from W.N.W. to S.W. as it fell
19	1·40	0·16	0·04	0·05	— 5	— 1	N.E., S., N.W.	15	C	General rain—wind veered through S. at noon, and R with rapid fall of temp.
27	1·67	0·23	0·	0·08	+ 4	— 1	S.W., S.	25	C	R fell at night at Stonyhurst, with temp. 4° higher than previous night
July 7	1·30	0·19	0·97	0·11	+ 4	— 4	N.E.	15	P	Rain with falling temp.; T storms; temp. very low at Aberdeen, all day 25° lower than at Kew at noon
Aug. 10	1·59	1·13	1·05?	0·92	+ 2	— 7	S.E., S.W.	25	P	Thunderstorms in places; max. temp. at 9 a.m.; temp. variable; barometrical depression
12	1·19	0·25	0·10	0·16	+ 1	+ 5	W.S.W.	25	E	
25	1·13	1·12	0·30	0·38	0	+ 3	E., S.W.	15	C	R, with rising temp. in morning and falling at night
28	1·62	0·	0·	0·01	+ 8	+ 2	W.S.W.	25	E	
Sept. 5	1·25	0·03	0·	0·	— 3	+ 2	S.	20	E	
9	1·30	0·40	0·32	0·16	+ 4	+ 7	S.W., N.W.	20	C	R, with S.W. wind and increasing temp., and then again from 2 p.m. with falling temp.
10	1·46	0·10	0·02	0·01	+ 4	+ 3	W., S.W.	20	E	
11	1·62	0·10	0·	0·	+ 4	+ 1	S.W.	20	E	
12	1·21	0·01	0·	0·03	+ 1	0	W.S.W.	25	E	
13	1·49	0·54	0·08	0·09	+ 1	— 2	W.S.W.	25	E	
27	2·06	1·16	0·33	0·30	+ 5	— 2	S.W.	30	C	Temp. rose fast from 3 a.m. to noon with rain, afterwards fluctuated very much, R continuing

Falls exceeding an inch at Seathwaite (continued).

1872. DATE.	Fall of Rain at				At Stonyhurst.				Whether Equatorial (E), Polar (P), or Cyclonic (C).	NOTES (APPLYING TO STONYHURST).
					Temperature.		Wind.			
	Seathwaite.	Reagill.	Greta Bridge.	Durh'm	Change Mdnght to Mdnght	Change 9 a.m. to 9 a.m. nxt. day	Direction.	Great'st velocity approx.		
	in.	in.	in.	in.	°	°		miles.		
Sept. 28	1·89	0·55	0·	0·15	0	+ 1	W.S.W.	40	E	Temp. rose from 3 a.m. to 3 p.m., with R at Stonyhurst
30	2·34	0·26	0·10	0·10	+ 8	+ 3	S.W.	25	E	Temp. rose fast from 6 a.m. to noon, and again from 9 p.m. till midnight
Oct. 1	2·05	1·10	0·	0·21	— 2	+ 1	S.W., S.	25	E	Temp. higher all day than on 30th Sept., and nearly even ; R at Stonyhurst 9 to 10 a.m. 1st, and 4 to 8 a.m. 2nd, temp. rising in both instances
6	2·61	0·	0·	0·22	+ 3	+ 5	S.W.	20	E	Temp. rose fast from 8 a.m., wind shifting to S.W.
8	1·53	0·43	0·24	0·40	+ 2	0	W.,S.W., N.W.	20	C	Wind backing till 6 a.m. 9th, then shifted to N.W. with heavy R
10	1·62	0·91	0·62	1·07	— 2	+ 1	S.E., S., N.W.	30	C	Temp. rose with fluctuations till 5 p.m., and from 10 p.m. a rapid fall occurred with the change of wind to N.W.
29	5·00	2·00	0·41	0·15	+ 7	+ 1	S.W., W.	30	E	Temp. rose till 3.30 a.m. on 30th with S.W. wind, and then suddenly fell with change to W.
Nov. 1	1·37	0·42	0·46	0·41	+ 1	0	S.E., S.W.	30	C	Temp. rose 8 a.m. to noon with rising wind, and fell from 7 p.m. ; R 5 p.m. to 8 p.m., and again at night
4	2·34	0·35	0·05	0·04	+13	+11	S., S.W.	30	E	
5	3·40	0·36	0·	0·	— 5	+ 4	S.W.	25	E	Temp. steady till 3 p.m., then fell till 9 p.m., rose again with R till 7 a.m. on 6th
19	1·17	0·55	0·21	0·25	+ 7	+12	N.E., S.W.	15	E	Frost early ; wind veered through S., with rising temp. from 9 a.m.
20	1·26	0·17	0·	0·	— 2	+ 2	S.W.	20	E	Temp. rose after midnight
22	1·11	0·46	0·83	0·63	— 3	+ 7	E., S.W., S.	40	C	Temp. fell from noon with some R ; rapid rise of temp. from 11 p.m. with R and S. gale
23	1·78	0·91	0·19	0·20	+ 6	— 6	S.S.W.	55	C	Heavy gale ; temp. declined from 2 p.m. ; R in forenoon

Nov. 25	1·29	0·71	0·53	0·34	+ 2	+10	S.E., S.W.	35	C	Temp. fell fast at 1 a.m., but rose from 9 a.m. with rain
Dec. 5	2·06	0·56	0·37	0·14	+14	+13	S., S.W.	35	E	
8	2·08	0·52	0·60	1·08	+ 1	— 1	S.W,E.,S,N.W.	40	C	Temp. variable with heavy rain ; storm centre near Stonyhurst ; bar. 28·08 at midnight
9	1·40	0·	0·	0·	— 4	— 5	W.	25	E	Temp. rose from 7 a.m. till 2 p.m, after which it ceased to R
16	2·48	0·	0·	1·81	— 4	— 2	E.	25	C	Temp. rose till 2 p.m. then declined till midnight ; at Glasgow it rose till midnight, then fell
22	1·11	0·30	0·43	0·22	+ 6	+ 6	N.E. to S.W.	20	C	Temp. rose from 6 a.m. with rain ; max. at 4 p.m., then fell slightly
23	2·11	0·70	0·	0·04	+ 1	— 3	S.S.W.	30	E	High temp. and steady
24	1·15	0·26	0·02	0·05	— 1	+ 4	S.	40	E	Temp. fell early, rose from 9 a.m. with gale and a falling bar.
27	2·70	0·81	0·	0·05	+ 4	0	S.	40	E	Temp. rose till 6 p.m. with heavy gale
1873.										
Jan. 1	1·40	0·40	0·14	0·08	+ 1	+ 2	S.S.W.	30	C	Temp. fell till 9 a.m., then rose with gale till 3 a.m., then again declined
4	1·03	0·44	0·	0·18	+ 2	0	S.E., S.W.	25	C	Temp. rose from 37° to 50° between 6 a.m. and 4 p.m., then declined as wind shifted to S.W. ; R at Stonyhurst 10 a.m. to 6 p.m., and afterwards at intervals
5	2·48	1·04	0·64	0·17	— 3	+11	S.W.	35	C	Temp. began to rise at 1 a.m. 6th
8	1·92	0·76	0·19	0·19	0	+ 1	S.	35	C	Temp. increased with sudden gale and R at noon
9	2·18	0·75	0·10	0·05	+ 3	— 1	S.	35	E	Temp. increased up to 11 p.m. with gale ; R continued till 2 a.m. 10th
10	1·65	0·93	0·01	0·	— 1	+ 2	S.	30	E	Temp. rose from 10 a.m. to noon, and continued high, with gale and slight R at 3 p.m., and again at night
12	2·75	0·40	0·18	0·	— 3	+ 5	S.W.	35	E	Temp. decreased till 7 p.m., then rose with gale and rain after midnight
13	3·85	0·22	0·04	0·	+ 7	+ 2	W.S.W.	35	E	Temp. continued to rise with gale and slight R
14	1·10	0·41	0·	0·	— 4	— 4	S.W.	30	C	Temp. rose slowly till 3 p.m., then fell
18	3·20	1·74	0·	0·35	+ 9	+ 4	S.S.W.	50	C	Temp. fell after midnight, and R ceased at 4 a.m.
26	1·59	0·30	0·07	0·21	0	+ 1	S.E.	30	E	Temp. nearly even all day, but rose on previous day from 20° at 6 a.m. to 38° at midnight
Feb. 25	1·61	0·46	0·	0·31	+22	+10	S.E.	20	E	Temp. 18° at midnight ; ranged on 24th from 13° to 28°
26	1·20	0·	0·67	0·26	— 1	— 4	W., N.W.	20	C	Temp. reached 44° at 3 p.m., then declined
Mar. 6	3·52	1·05	0·90	0·51	+ 7	+ 4	S.	20	E	Rose 12° from 6 a.m. to 3 p.m., and remained steady till midnight

Falls exceeding an inch at Aysgarth.

1873. DATE.	Fall of Rain at				At Aysgarth.				Whether Equatorial (E) Polar (P), or Cyclonic (C)	NOTES (APPLYING TO AYSGARTH).
					Temperature.		Wind at 9 p.m.			
	Seathwaite.	Reagill.	Aysgarth.	Durh'm	Change 9 a.m. to 9 a.m. nxt. day	Change 9 p.m. pr'vious day to 9 p.m.	Direction.	Force.		
	in.	in.	in.	In.	°	°		0—12		
Sept. 30	4·00	0·17	0·02	0·32	+17	+10	S.S.E.?	1	E	Winds easterly on east coast
Oct. 1	1·10	0·	0·83	0·47	+ 1	+12	S.W.	1	E	Very mild—complete change ; heavy R from noon
2	2·00	0·43	0·29	0·74	— 1	— 1	S.W.	1	C	Mild
6	2·50	0·46	0·06	0·	+ 4?	+ 4	S.W.	7?	E	Overcast ; some R ; gale at night
9	4·20	0·15	0·12	0·04	+20	+17	S.W.	6	E	Sharp frost ; wind rose rapidly, and blew a gale most of afternoon and night with driving rain
21	2·23	0·30	[0·15?]	0·02	+ 4	+ 1	S.W.	5	E	
30	1·10	0·03	0·04	0·07	+ 4	0	S.W.	4	E	Slight frost ; rainy afternoon
31	2·10	0·65	0·43	0·17	+ 1	+ 1	S.S.W·	3	C	Clouds very low on hills
Nov. 21	1·73	0·01	0·03	0·03	+ 6	+10	S.W.	8	E	Coming on to blow and rain ; very stormy at night
25	1·25	0·14	0·07	0·08	+11	+ 3	S.W.	2	E	Slight hoar frost—very fine day ; R at night
26	2·17	0·52	0·14	0·05	— 6	+ 5	S.	6	E	Clouds very low on hills
28	1·48	0·11	0·06	0·	+ 9	+ 9	S.W.	4	E	
29	1·06	0·37	0·39	0·05	—12	— 7	N.W.	7	C	Wind at 9 a.m. S.W., force 9, temp. 52°
Dec. 1	1·72	0·01	0·01	0·	+ 3	+18	S.W.	6	E	Cloudy and rather windy ; clouds low on hills
15	1·56	0·22	0·08	0·	+ 9	+ 6	S.W.	7	E	R with heavy gale at night
30	1·80	1·03	0·36	0·13	+ 7	+11	S.W.	7	E	Thaw ; heavy R commenced at 4.30 p.m.

Falls amounting to a third of an inch at Durham and Greta Bridge.

1872. DATE.	Fall of Rain at				At Stonyhurst.				Whether Equatorial (E) Polar (P), or Cyclonic (C).	NOTES (APPLYING TO STONYHURST).
					Temperature.		Wind.			
	Seathwaite.	Reagill.	Greta Bridge.	Durh'm	Change Mdnght to Mdnght	Change 9 a.m. to 9 a.m. nxt. day	Direction.	Great'st velocity approx.		
	in.	in.	in.	in.	°	°		miles.		
Jan. 22	0·94	0·18	0·40	0·34	+ 9	+ 8	N.E., E., S.E.	20	C	
23	0·	0·24	0·51	0·43	— 1	— 5	E., S.	20	P	Very low bar. ; heavy S.E. gale at Aberdeen
Feb. 4	0·93	0·07	0·47	0·40	+ 1	+ 2	S., S.E.	20	C	
24	1·59	0·73	0·43	0·96	+12	+ 4	S.S.W.	20	C	
25	0·	0·06	0·28	0·39	— 9	— 2	S., N.E.	15	P	Heavy E. gale at Aberdeen
Mar. 20	0·	0·	0·	0·65	— 6	— 6	N.W., N.E.	20	P	Snow storms and severe weather from 20th to 26th, inclusive
21					+ 1	+ 3	N.E.	20	E	
22	0·	0·	0·	0·47	+ 1	+ 2	N.N.W., N.E.	25	E	
27	1·13	0·75	0·	0·39	+10	+ 7	S.E., S.W.	35	C	Thaw
April 21	0·	0·06	0·95	1·53	+ 9	+ 5	N.E.	30	E	Continuous rise of temp. from midnight of 20th to 3 p.m. 22nd
27	0·84	1·10	0·51	0·43	+ 1	— 2	S., N., W.	20	C	
May 7	1·50	0·35	0·10	0·67	0	+ 2	S.W.	30	C	
11	0·34	0·02	0·	0·69	+ 2	+ 2	N.E.	20	E	Temp. rose from 7 a.m. 12th with sudden rain
13	0·02	0·	0·29	0·35	+ 2	+ 3	N.E.	30	E	
June 9	0·98	0·25	0·66	0·39	+ 2	— 5	S.E., S.W.	20	C	
18	0·	0·24	0·66	0·32	— 2	—10	N.E., E.	20	P	Thunderstorms
July 12	0·90	0·89	1·17	0·43	0	— 1	E., S.	15	P	Temp. risen in N.W., fallen elsewhere
13	0·02	0·03	0·44	0·73	— 6	— 2	N.N.E.	20	P	General R, with decreasing temp.
26	0·08	0·35	0·44	1·24	— 1	— 3	E., W.	15	P	Great fall of temp. at 3 p.m. with R, and again at night
Aug. 5	0·38	0·32	0·32	0·45	— 5	0	E. to N.	15	P	R with falling temp. from noon till 4 a.m.
10	1·59	1·13	1·05?	0·92	+ 2	— 7	S.E., S.W.	25	C	
25	1·13	1·12	0·30	0·38	0	+ 3	S.W.	15	C	General rain
31	0·	0·01	0·	0·40	— 2	0	W.	20	P	

Falls amounting to a third of an inch at Durham and Greta Bridge (continued).

1872. DATE.	Fall of Rain at				At Stonyhurst.				Whether Equatorial (E), Polar (P), or Cyclonic (C).	NOTES (APPLYING TO STONYHURST).
					Temperature.		Wind.			
	Seathwaite.	Reagill.	Greta Bridge.	Durh'm	Change Mdnght to Mdnght	Change 9 a.m. to 9 a.m. nxt. day	Direction.	Great'st velocity approx.		
	in.	in.	in.	in.	°	°		miles.		
Sept. 1	0·49	0·40	1·17	0·47	+ 2	+ 1	S.W., E.	15	P	
23	0·28	0·42	0·52	0·50	+ 3	— 4	S.W., N.E.	30	C	General R with constant or decreasing temp.
24	0·	0·07	0·	0·50	— 3	— 3	N.E., N.W.	25	P	T storms and R, with rising N.W. wind, Scarboro' 1.37
25	0·	0·	0·	1·07	+ 4	+ 4	N.W.	30	E	R with heavy N.W. gale, Scarboro' 1.37
Oct. 8	1·53	0·43	0·24	0·40	+ 2	0	W., S.W., N.W.	20	C	
10	1·62	0·91	0·62	1·07	— 2	+ 1	S.E., S., N.W.	30	C	
11	0·28	0·20	0·11	0·43	+ 2	— 1	N.W.	20	C	
16	0·19	0·28	0·64	0·83	+ 7	+ 4	N.E.	15	E	
20	0·41	0·35	0·	0·60	+ 3	+ 7	N.E.	10	E	Temp. rose till 3 p m., then slowly fell
21	0·84	0·85	0·68	1·15	— 3	— 3	N.N.E., W.	10	P	Heavy R with steadily declining temp.
Nov. 1	1·37	0·42	0·46	0·41	+ 1	0	S.E., S.W.	30	C	
11	0·	0·04	0·25	0·56	+ 1	+ 2	N.	20	E	
15	0·	0·04	0·83	1·60	+ 2	— 1	N.E.	20	C	Temp. rising at Aberdeen intermittently and decidedly on morning of 16th, with R
22	1·11	0·46	0·83	0·63	— 3	+ 7	E., S.W., S.	40	C	
25	1·29	0·71	0·53	0·34	+ 2	+10	S.E., S.W.	35	C	
29	0·45	0·30	0·33	0·43	+ 4	— 1	S.E.	15	C	
Dec. 8	2·08	0·52	0·60	1·08	+ 1	— 1	S.W, E, S, N.W.	40	C	
10	0·	0·	0· ?	0·40	+ 2	+ 3	N.E., N.	15	E	
16	2·48	0·	0· ?	1·82	— 4	— 2	E.	25	P	
17	0·33	0·16	0· ?	0·79	+ 4	+ 3	N.E.	25	E	
28	0·68	0·83	0·41	0·36	— 2	— 2	S.	28	C	Gale dying out

GENERAL SUMMARY.

Falls exceeding an inch at Seathwaite.

Date.	Seathwaite.	Reagill.	Greta Bridge.	Durham	No. of Falls.	At Stonyhurst. Mean change in dry bulb. Mdnght to Mdnght	9 a.m. to 9 a.m.	Wind. General direction.	Mean greatest velocity
	in.	in.	in.	in.		°	°		miles.
1872.									
1st Quarter -	43·64	12·61	...	4·13	23	+3·4	+3·0	S., S.W.	29·6
2nd ,, -	13·06	2·17	0·66	1·18	8	+1·7	+0·1	S.W.	25·6
3rd ,, -	21·45	5·84	3·27	2·42	14	+2·8	+0·9	S.W.	23·6
4th ,, -	41·62	11·52	4·96	7·31	21	+2·1	+2·9	S.S.W.	30·0
Totals - -	119·77	32·14	...	15·04	66				
Means - -	1·81	0·49	...	0·23	..				
1873.									
1st Quarter -	29·48	8·90	2·94	2·31	14	+2·8 [1]	+2·4 [2]	S. [3]	30·7 [4]
4th ,, -	32·00	4·60	...	2·17	16	+6·2	+4·8	S.W.	4·7
Totals - -	61·48	13·50	..	4·48	30				
Means - -	2·05	0·45	...	0·15					

1 Change 9 p.m. to 9 p.m . 2 do. 9 a.m. to 9 a.m., 3 Direction at 9 p.m., 4 Force at 9 p.m—All at AYSGARTH.

The same classified.

Date.	Equatorial falls. (E) Seathwaite.	Equatorial falls. (E) Durham	Polar falls (P). Seathwaite.	Polar falls (P). Durham	Cyclonic falls (C) Seathwaite.	Cyclonic falls (C) Durham	Change in dry bulb, 9 a.m. to 9 a.m.. with Equatorial falls (E).	Polar falls (P).	Cyclonic falls (C).	Number of falls. Equatorial (E)	Polar (P)	Cyclonic (C)
	in.	in.	in.	in.	in.	in.	°	°	°			
1872.												
1st Quarter	25·89	1·32	...	...	17·75	2·81	+3·7	..	+2·2	13	0	10
2nd ,, -	2·70	0·21	...	...	10·36	0·97	+3·5		—1·0	2	0	6
3rd ,, -	14·07	0·55	2·89	1·03*	4·49	0·84	+1·7	—5·5	+2·6	9	2	3
4th ,, -	24·10	1·10	...	...	17·52	6·21	+3·8	...	+1·7	12	0	9
Totals - -	66·76	3·18	2·89	1·03	50·12	10·83						
1873.												
1st Quarter	17·15	1·08	...	...	12·33	1·23	+3·3	...	+1·4	7	0	7
4th ,, -	26·84	1·21	...	...	5·16	0·96	+6·8	..	—4·0	13	0	3
Totals - -	43·99	2·29	...	...	17·49	2·19						

* 2·02 at Greta Bridge.

Falls amounting to a third of an inch at Durham and Greta Bridge.

Date.	Seathwaite.	Reagill.	Greta Bridge.	Durham	No. of falls.	At Stonyhurst.			
						Mean change in dry bulb.		Wind.	
						Mdnght to Mdnght	9 a.m. to 9 a.m.	General direction.	Mean greatest velocity
	in.	in.	in.	in.		°	°		miles.
1872.									
1st Quarter-	4·59	2·03	...	4·03	8	+2·0	+1·4	N.E., S.E.	21·6
2nd ,, -	3·68	2·02	3·17	4·38	7	+2·0	—0·7	N.E.	24·3
3rd ,, -	4·87	4·74	5·41	7·09	11	—0·5	—1·2	E.	20·4
4th ,, -	14·66	6·50	6 53?	12·90	17	+1·0	+1·5	NW, NE, E	24·0
Totals - -	27·80	15·29	...	28·40	43				
Means - -	0·64	0·36	...	0·66					

The same classified.

Date.	Equatorial falls (E).*		Polar falls (P).		Cyclonic falls (C).	
	Seathwaite.	Durham.	Seathwaite.	Durham.	Seathwaite.	Durham.
	in.	in.	in.	in.	in.	in.
1872.						
1st Quarter	0·	1·12	0·	0·82	4·59	2·09
2nd ,, ...	0·36	2·57	0·	0·32	3·32	1·49
3rd ,, ...	0·	1·07	1·87	4·22	3·00	1·80
4th ,, ...	0·93	3·18	3·32	2·97	10·41	6·75
Totals	1·29	7·94	5·19	8·33	21·32	12·13

* These falls were all with N.E. winds.

Aysgarth, Bedale.

THE RAINFALL OF 1873 IN THE COUNTY OF HEREFORD.

(From the "Hereford Times," February 28th, 1874.)

By the Rev. Nash Stephenson.

I subjoin a summary of the rainfall of last year of the county of Hereford, so far as it was taken by observers at eighteen different stations. It will be seen that amongst them West Malvern is included. Politically speaking, West Malvern is in the county of Worcester; but, as it is situate on the western or Hereford side of the Malvernian range of hills, and is the watershed of a large tract of the county of Hereford, it should for geographical and physical purposes be included in the county of Hereford rather than in the county of Worcester.

By reference to the map of the county of Hereford it will be seen that these eighteen stations are equally distributed over the whole of the county. If additions are required anywhere it would be in the neighourhood of Shobdon, Brimfield, Ocle Pychard, Orcop, and Clifford, and it may be hoped that some will offer themselves in these localities as observers for your paper. But on the whole the county is fairly and fully represented, and the average of the returns now given may be accepted as a true and correct estimate of the mean rainfall of the county during last year.

There were 13 stations which made returns for the whole year: one for the ten last continuous months; one for the nine last; one for the eight last; and two for the six last continuous months. The stations are tabulated according to the depth of rain falling in each of them, the maximum fall heading the list.

We learn from the 13 stations that recorded the year that the greatest amount of rain, 32·09 in. fell at Rocklands, near Ross, and the least, 21·46 in. at Ledbury, this station registering 1·25 in. less in twelve months than Stoke Bliss registered in ten. The mean rainfall of the 13 stations for the year was 26·16. Mr. Isbell tells us in your impression of the 17th ult. that in 1872, the wettest year recorded by Herefordshire observers, the total rainfall in Hereford was 42·25 in. The excess, therefore, of 1872 over last year was 16·09 in. The same striking difference between these two consecutive years is remarked upon by Mr. Symons in a summary which he gave in the *Times* of the 11th inst., in which he shows the total depth of rain at 13 different stations fairly scattered throughout England. At Sheffield the fall in 1873 was not only 28 per cent. below the average, but actually less than half that which fell in 1872; the amounts being in 1872, 45·81; and in 1873, 22·40. There are, says Mr. Symons, very few previous cases on record in this country of the rainfall of one of two consecutive years being more than twice that of the other. It may be interesting to learn that, although the unprecedented amount of 42·25 in. fell in Hereford in 1872, there are other parts of England in which this maximum was far surpassed. At Tavistock the fall was 71·90; at Coniston, in Lancashire, it was 100·00; and Seathwaite, in Cumberland, it actually reached 182·05, and at the Stye 243·98.

Twelve stations in the county give the maximum fall in 24 hours, that is to say in any one rainfall day ending nine o'clock in the morning, throughout the year,

and three more stations give the last half of the year, and also include June. The 29th of June is given as the wettest day by the whole of these stations with the exception of Lynhales, near Kington, where only 0·89 fell on this day, whereas 1·22 fell on July 4th. Two stations give the six last continuous months, and one of these names the 24th, and the other the 25th of August as the wettest days.

The remarkable fall on the 29th of June, which was tropical in its severity, was produced by a heavy thunderstorm, which commenced about one o'clock in the afternoon of that day and lasted about six hours. It would appear to have swept over the whole of the county, and to have been precipitated with varying violence from the maximum of 2·32 at West Malvern to the minimum of 1·20 at Staunton-on-Wye, showing a difference of 1·12 in. between these extremes. I add a list of the different stations, graduating them according to this day's rain, but I fail to discover from their geographical position any cause why they should be placed in the order in which they occur. West Malvern, 2·32 ; Leysters Vicarage, near Tenbury, 2·03 ; Ledbury, 1·92 ; Bromyard, 1·90 ; Brockhampton, near Bromyard, 1·90 ; Whitfield, 1·88 ; the Graig, near Ross, 1·84 ; Much Marcle (Careswall), 1·81 ; Stretton Sugwas, 1·77 ; Fownhope, 1·75 ; Stoke Bliss, 1·72 ; Hereford, 1·69 ; Rocklands, near Ross, 1·44 ; Staunton-on-Wye, 1·20 in.

In ten stations the days throughout the year on which ·01 or more rain fell are given, and it would appear that while at Hereford, which stands at the head of the list, there were 201 rainy days, at Ledbury there were only 97.

The average of rainy days at the ten stations was 161. It would not be safe to arrive at conclusions from only a year's experience, but from the table it would appear that Ledbury had less rain and more dry days in 1873 than any other station.

In classifying the months according to the amount of rain which has fallen, I find from returns which I possess that in December there fell ·65 in. ; April, ·98in. ; February, 1·45 ; September, 1·57; October, 1·84; November, 1·93 ; May, 2·14 ; July, 2·60 ; June, 2·83 ; March, 3·15 ; August, 3·29 ; and January, 3·44 in. In racing events there are certain gentlemen yclept "prophets," who, for a consideration, "spot" future winners. If these seers had turned their attention to pluvial events, not a few would have been considerably out in their predictions in "spotting" the driest months, when it turns out that December and April head the list.

I fear that this small chapter on rainfall will appear a dry and dusty subject to many of your readers. Perhaps they have little considered how large a share rainfall occupies in the well-being of life. Rainfall regulates our daily occupations and amusements, and in numberless instances our daily work. The rainfall to a considerable degree determines our crops and so governs the price of our food and the measure of our national prosperity. Rainfall materially affects our public health and determines the per centage of our mortality. I trust, therefore, that your readers will find an increasing interest in the subject, and that your observers will, with accuracy and impartiality, kindly furnish you with the monthly returns of their stations, so that at the end of the year there may be the basis of ascertaining the true mean rainfall of our county, and of enabling more and abler pens than mine, to point out the bearing and influence which the experience of the year has had on many branches of physical and meteorological research.

Rainfall at stations in the County of Hereford during the year 1873.

Name of Station.	Name of Observer,	Total depth for the whole year.*	Greatest fall in 24 hours.		Days on which ·01 or more fell.	Days on which less than ·01 or no rain fell	Total number of days.
			Depth.	Date.			
		in.	in.				
1 Rocklands, near Ross ...	J. M. Herbert ...	32·09	1·44	June 29	170	195	365
2 Bromyard Vicarage ...	Nash Stephenson.	28·28	1·90	June 29	178	187	365
3 Ross (The Graig)	H. Southall ..	27·54	1·84	June 29	181	184	365
4 Bryngwyn	J. Rankin	26·94	...	...	...	...	365
5 Leysters Vicarage	T. S. Hewitt ...	26·82	2·03	June 29	115	250	365
6 West Malvern . ..	A. H. Hartland .	26·58	2·32	June 29	...	...	365
7 Much Marcle (Careswall)	T. Charles... ...	25·87	1·81	June 29	186	179	365
8 Hereford...	E. J. Isbell ...	25·46	1·69	June 29	201	164	365
9 Lynhales, near Kington .	S. W. J. Robinson.	25·42	1·22	July 4	...	...	365
10 Fownhope Vicarage ...	T. West	25·34	1·75	June 29	162	203	365
11 Staunton-on-Wye	H. W. Phillott...	24·37	1·20	June 29	174	191	365
12 Stretton Sugwas Rectory.	H. C. Key... ...	23·98	1·77	June 29	154	211	365
13 Ledbury	T. E. Wheatley .	21·46	1·92	June 29	97	268	365
14 Stoke Bliss	G. E. Alexander.	22·71*a*	1·72	June 29	122	184	306
15 Whitfield	W. Wheatley ...	18·10*b*	1·88	June 30	110	165	275
16 Brockhampton, near Bromyard...	J. Eling	18·34*c*	1·90	June 29	105	140	245
17 Longtown	C. L. Eagles ...	15·14*d*	0·80	Aug. 25	72	112	184
18 Hampton Court	J. H. Arkwright.	11·10*d*	0·75	Aug. 24	78	106	184

a. For the ten last continuous months.
b. For the nine last continuous months.
c. For the eight last continuous months.
d. For the six last continuous months.

* Three errors, made by observers in their returns to Mr. Stephenson, have been detected by examination of the daily entries, and corrected in the General Tables at the end of this volume.—ED. *British Rainfall.*

TERMINATION OF THE RAIN GAUGE EXPERIMENTS AT ROTHERHAM.

It would have been appropriate, and would have afforded us much pleasure, to have given, along with the following tables, which close the eight year's series, a complete *résumé* of the whole set. At this period of the year it can, however, only be done by delaying the publication of the present volume, which appears to us so undesirable that we reluctantly postpone our remarks until next year. We regret to add, that no one offered to start an azimuthal gauge for comparison with Mr. Chrimes', because such a series, especially if there had been several, would undoubtedly have thrown much light on the causes of the irregularities which exist even in the mean annual fall in the eastern plain of England, and especially along the east coast. It would be as uncourteous if, on the part of our readers and ourselves, we did not tender our thanks to Mr. Chrimes for what he has done, as it would be unjust not to mention the remarkable accuracy of the voluminous records with which he has favoured us—the most rigorous examination has failed to reveal a single error.

RAIN GAUGE EXPERIMENTS, BOSTON RESERVOIR, ROTHERHAM.

Lat. 53° 25′ N., Long. 1° 20′ W. 381 ft. above the Sea Level.
For the Year 1873.

	Five Mouthed Gauge.					Inclined Rotating Gauges.				
Height above ground.	5ft.					5 ft.				
Months.	Facing East.	Facing North.	Facing West.	Facing South.	Horizon Centre.	22½°	45°	67½°	90°	Tipping
January	·162	·190	·997	1·555	1·770	2·361	2·634	2·421	1·786	2·408
Feb. ...	·307	·967	·306	·368	·558	1·064	1·434	1·395	1·561	1·265
March..	1·548	1·160	·271	·957	1·787	2·875	3·356	3·604	2·864	2·917
April ...	·112	·481	·255	·030	·503	·817	·800	·942	·664	762
May ...	·635	1·173	·190	·436	1·678	2·311	2·512	2·299	1·761	2·016
June ...	·287	·454	·034	·023	1·147	1·322	1·237	·937	·538	1·245
July ...	·117	·099	·430	·317	1·557	1·768	1·554	·961	·502	1·691
August.	·488	·267	·221	·443	2·083	2·378	2·162	1·587	·820	2·200
Sept. ...	·400	·317	·366	·214	1·461	1·751	1·688	1·387	·832	1·617
October	·027	·267	·722	·425	1·374	1·741	1·826	1·585	1·088	1·682
Nov. ...	·846	1·179	·389	·194	1·820	2·417	2·620	3·051	1·598	2·177
Dec. ...	·010	·054	·081	·088	·163	·217	·208	·210	·138	·175
Totals..	4·939	6·608	4·262	5·050	15·901	21·022	22·031	20·379	14·152	20·155

Elevated Gauges.

Height above ground.....	1 ft.			5 ft.			10 ft.		
Months.	Read Daily.	Read Mnthly.	Diff.	Read Daily.	Read Mnthly.	Diff.	Read Daily.	Read Mnthly.	Diff.
January	1·831	1·830	—·001	1·696	1·689	—·007	1·625	1·562	—·063
February.....	·668	·695	+·027	·571	·584	+·013	·508	·531	+·023
March	1·772	1·999	+·227	1·831	1·817	—·014	1·668	1·668	...
April	·585	·554	—·031	·537	·570	+·033	·471	·466	—·005
May.....	1·795	1·818	+·023	1·680	1·732	+·052	1·601	1·537	—·064
June	1·212	1·210	—·002	1·172	1·220	+·048	1·123	1·118	—·005
July..	1·654	1·574	—·080	1·567	1·618	+·051	1·506	1·473	—·033
August	2·158	2·142	—·016	2·073	2·060	—·013	2·010	2·028	+·018
September ...	1·517	1·554	+·037	1·475	1·504	+·029	1·410	1·436	+·026
October	1·482	1·483	+·001	1·378	1·386	+·008	1·277	1·266	—·011
November ...	1·929	1·935	+·006	1·832	1·861	+·029	1·761	1·749	—·012
December ...	·186	·182	—·004	·155	·160	+·005	·145	·136	—·009
Totals	16·789	16·976	+·187	15·967	16·201	+·234	15·105	14·970	—·135

ROTHERHAM EXPERIMENTS—(*con.*)

ELEVATED GAUGES—(*con.*)

Height above ground	15 ft.			20 ft.			25 ft.		
Months.	Read Daily.	Read Mnthly.	Diff.	Read Daily.	Read Mnthly.	Diff.	Read Daily.	Read Mnthly.	Diff.
January.....	1·594	1·621	+·027	1·608	1·572	—·036	1·596	1·583	—·013
February	·502	·539	+·037	·475	·510	+·035	·479	·480	+·001
March	1·624	1·668	+·044	1·567	1·635	+·068	1·630	1·644	+·014
April	·462	·497	+·035	·443	·496	+·053	·442	·430	—·012
May	1·593	1·650	+·057	1·551	1·618	+·067	1·569	1·515	—·054
June	1·158	1·180	+·022	1·087	1·162	+·075	1·091	1·075	—·016
July	1·493	1·563	+·070	1·502	1·555	+·053	1·422	1·489	+·067
August	2·017	2·064	+·047	1·981	2·076	+·095	1·887	1·862	—·025
September... ..	1·477	1·446	—·031	1·378	1·445	+·067	1·395	1·398	+·003
October	1·273	1·280	+·007	1·235	1·245	+·010	1·226	1·187	—·039
November.....	1·734	1·770	+·036	1·692	1·725	+·033	1·715	1·739	+·024
December	·139	·150	+·011	·131	·136	+·005	·135	·135	...
Totals	15·066	15·428	+·362	14·650	15·175	+·525	14·587	14·537	—·050

Notes on Weather, and exceptional readings.

Jan. 3rd. Thunder, 3.0 p.m.
,, 19th. Slight snow.
,, 21st. Snow.
,, 22nd. Largest amount in highest gauge.
Feb. 2nd. Snow.
,, 4th. Largest amount in highest gauge.
,, 23rd. Snow ; none melted.
,, 24th. Snow ; none melted.
Mar. 7th. Largest amount in highest gauge.
,, 10th. Snow and rain.
,, 11th. Snow and rain.
,, 16th. Snow and rain.
,, 21st. Snow and rain ; 5 ft. gauge greatly in excess.
,, 30th. 5 ft. gauge greatly in excess.
April 15th. Thunder, 7.15 p.m. ; S. and S.E.
,, 24th. Snow showers.
May 3rd. Thunder showers at 1 p.m. and 2 p.m.
June 3rd. Thunder, 5.30 p.m. and at 8 p.m.
July 22nd. Thunder, 5 a.m. No rain.
Aug. 9th. Thunder, 9.25 a.m.
,, 25th. Thunder, 12.40 p.m.
Sept. 14th. Thunder, 3 p.m.
Oct. 7th. Largest amount in highest gauge.

R. CHRIMES.

ROYAL OBSERVATORY, GREENWICH.

Lat. 51° 28′ 38″ N. Long. 0° 0′ 0″

Amount of Rain collected in different gauges in each month of the year 1873.

1873	MONTHLY AMOUNT OF RAIN COLLECTED IN EACH GAUGE.						
	Self-registering Gauge of Osler's Anemometer.	Second Gauge at Osler's Anemometer.	On the roof of the Octagon Room.	On the roof of the Library.	On the roof of the Photographic thermometer shed.	Cylinder partly sunk in the ground. read daily.	Cylinder partly sunk in the ground read mntly
	in.	in.	in.	in.	in.	in.	in.
Jan....	1·21	1·29	1·72	1·35	2·35	2·45	2·48
Feb....	0·69	0·98	1·24	1·38	1·67	1·93	1·82
March	0·74	0·90	0·93	1·10	1·25	1·33	1·42
April..	0·18	0·22	0·38	0·55	0·53	0·61	0·50
May...	1·02	1·13	1·31	1·44	1·44	1·49	1·46
June...	2·00	2·16	2·28	2·74	2·54	2·56	2·58
July...	1·40	1·49	1·54	1·64	1·82	1·85	1·90
Aug....	2·61	2·80	2·99	3·14	3·12	3·18	3·28
Sept...	1·82	1·96	2·18	2·44	2·56	2·52	2·60
Oct. ...	1·81	1·87	2·30	2·63	2·65	2·55	2·79
Nov ...	1·71	1·83	2·14	2·20	2·55	2·58	2·70
Dec....	0·11	0·18	0·27	0·27	0·32	0·31	0·33
Sums..	15·30	16·81	19·28	20·88	22·80	23·36	23·86

The heights of the receiving surfaces are as follows:

	Above the mean level of the Sea.		Above the Ground.	
	ft.	in.	ft.	in.
The two Gauges at Osler's Anemometer	205	6	50	8
Gauge on the roof of the Octagon Room	193	2½	38	4½
Gauge on the roof of the Library	177	2	22	4
Gauge on the roof of the Photographic Thermometer Shed	164	10	10	0
The two Cylinder Gauges, partly sunk in the ground ...	155	3	0	5

JAMES GLAISHER, F.R.S.

RAIN GAUGE EXPERIMENTS AT ALDERSHOT CAMP, HAMPSHIRE.

Lat. 51° 15′ 25″ N. Lon. 0° 45′ 36″ W. Height above Sea, 325 ft.

FOR THE YEAR 1873.

Height above ground	0ft. 0 in	0ft. 6 in	3 ft.	6 ft.		12 ft.	25 ft.	30 ft.	Days on which ·01 or more fell.	Mean amount of horizontal movement of air.
Diameter of Funnel..	8 in.	8 in.	5 in.	5 in.	5 in. tilted at 45°	5 in.	8 in.	5 in. tilted at 45°		
	in.	in.	in.	in.	in.	in.	in.	in.		miles.
January	4·30	4·17	4·04	3·87	7·97	3·69	3·21	7·95	19	335
February	2·39	2·33	2·27	2·18	3·21	2·01	1·75	3·25	13	247
March ...	2·56	2·51	2·42	2·28	3·71	2·02	1·55	3·76	20	244
April ...	0·56	0·55	0·54	0·53	0·68	0·46	0·40	0·67	10	267
May.....	1·25	1·24	1·19	1·14	1·57	1·05	0·93	1·54	12	215
June ...	1·65	1·61	1·54	1·49	1·95	1·39	1·25	1·94	10	220
July.....	2·17	2·13	2·10	2·03	2·90	1·82	1·58	2·92	11	241
August..	2·07	1·98	1·92	1·86	2·35	1·68	1·55	2·36	17	256
Sept. ...	2·69	2·64	2·59	2·49	3·49	2·28	2·11	3·49	12	237
October..	2·75	2·70	2·64	2·54	3·60	2·40	2·13	3·59	16	208
Nov	2·55	2·49	2·39	2·26	3·75	2·08	1·83	3·77	14	254
Dec.....	0·69	0·68	0·69	0·64	1·01	0·55	0·49	1·02	9	199
Totals ...	25·63	25·03	24·33	23·31	36·19	21·43	18·78	36·26	163	Mean 244

J. ARNOLD, F.M.S.,
Colour-Sergeant, A.H.C.

CHRONICLE OF NEW STATIONS ESTABLISHED, AND CHANGES IN THE PERMANENT STAFF OF OBSERVERS, DURING THE PAST YEAR.

THE organization, the labours of whose members during 1873 form the basis of the present volume, is becoming so large that it is increasingly desirable to render the published information as nearly complete as possible. We believe that a running commentary on the *principal changes* in our staff will be interesting, and also useful by promoting friendly emulation in some counties which are retrograding, by directing attention to important alterations in the stations, and, lastly, by showing when it is futile to look for the continuance of any individual record in future volumes.

There is one cause which will prevent these remarks ever being perfect, viz., the dilatoriness of many observers in forwarding their returns. We write this article more than *two months* after the close of 1873, and yet there are 290 records which have not yet reached us, and respecting which we possess and can give no account. We believe that if these gentlemen realized the inconvenience which they caused they would be more prompt in future. There still remain, however, a mass of facts, many of which are well worthy of record. We shall take the counties in the order in which they follow in the General Tables, but it must be distinctly understood that this chronicle does not pretend to notice *all* changes; it simply gives a selection of the more important.

DIVISION I.—MIDDLESEX.

The Chiswick instruments have been reorganized; the record is from a new, and we believe well-placed gauge. A new station has also

been started at Hanworth (where one was much required) by Mr. G. Anderson, to whom we are also indebted for the erection of several other gauges in the south of Ireland. No records will be received in future from Fairlight, Hampton Wick, the observer having removed to Grove Road, Surbiton.

DIVISION II.—SOUTH-EASTERN COUNTIES.

SURREY.

The records at Shalford Common, and Commercial Road, Guildford, are believed to be discontinued; those from Woburn Road, Croydon, and Birchwood House, Godstone, have not been received, owing to illness, and the former has not been observed. A new station was started at Sandy Cross, Dorking, in June.

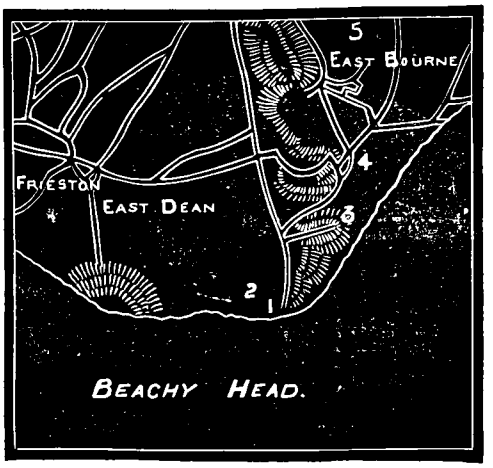
KENT.

The gauge formerly at Boxley Road, Maidstone, has been removed to East Farleigh, and will be observed there. The following records are terminated :—Chartwell, Westerham; Heathfield Lodge, Chiselhurst; and Eltham Green, (Field Gauge); New records have been received from Buckland, Dover; Staplehurst-place; Sibton, Lyminge; Clare House, W. Malling; Preston Hall, Maidstone; and Dymchurch, on Romney Marsh. The last is a very important addition, as tending to lessen the large vacant space between Hastings and Hythe.

SUSSEX.

As elsewhere mentioned, this county is one of those in which I have been aided by a county representative—Mr. Sawyer, F.M.S., and the result augurs well for the extension of the arrangement. There is only one record terminated, viz., Bepton Hill, Chichester, but unfortunately it is an important one, being almost, if not quite, the wettest place in the county, and it is of course quite as necessary to have extreme stations as mean ones. The record at West Thorney Island is also unfortunately incomplete. On the other hand, several important additions have to be noticed. The neighbourhood of Horsham had been so imperfectly supplied with records for some few years that if any legal question had arisen (as constantly occurs) dependent upon the amount of rainfall, no satisfactory evidence would have been forthcoming. We therefore notice with pleasure the commencement of a record at Midhurst by Capt. Bigg. Two interesting sets of comparative observations have been organized, one to determine the effect of Beachy Head upon

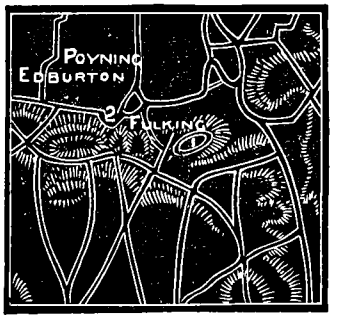
the rainfall of the immediate neighbourhood, the stations being (as shown on the accompanying sketch)—



1	Beachy Head (old gauge)	4	Eastbourne, Pevensey Road.
2	,, ,, (new ,,)	5	,, Cemetery.
3	Mead's Rectory		

It would be very desirable to complete this group by another gauge on the Western slope, say either at the Lighthouse or Frieston.

The other set are at the abrupt northern declivity of the South Downs, near the Devil's Dyke, one gauge being at the Dyke House (1), at 680 feet above the sea, and the other at the base at Fulking (2), only



100 feet above the sea. The higher station caught less, being 31·08 against 33·47, but both amounts largely exceed the fall at low stations on the south side of the Downs. Two other new and useful stations are Northiam and The Friars, Winchelsea, both important as tending to lessen the large unrepresented tract N.-Westward of Dungeness, already referred to under the adjoining county of Kent.

HAMPSHIRE.

This county is also one of the few for the honorary superintendence of which an observer has volunteered; but residing, as Mr. Griffith does, at the northern limit of the county, it would be utterly unreasonable to hold him responsible for the fact there is not a single gauge in the western portion of the Isle of Wight. In the centre and north of the county there is not only no retrogression, but, thanks to Mr. Griffith, considerable progress, each of the three following stations being several miles from any other—Litchfield Rectory, Whitchurch; Andover, and Kingsclere. The returns from Portsea Garrison Hospital and Hartley Grange are imperfect; but, on the other hand, we are glad again to find that that from Leigh Park is perfect.

BERKSHIRE.

The only record in this county which has been interrupted is that at Thamesfield, Henley-on-Thames, which is terminated, at any rate for the present. Two new ones have been commenced, viz., Bearwood, Wokingham; and The Acacias, Reading; and Abingdon has resumed its place in our tables, whence it was absent in 1872, owing to illness. Stations are much wanted in the neighbourhood of East Ilsey, Lambourn, and between Faringdon and Oxford.

DIVISION III.—SOUTH-MIDLAND COUNTIES.

HERTS.

No important change in this county, except that caused by the removal of the Rev. F. W. Stow to Aysgarth, Yorks (which see).

BUCKS.

We are glad to see the Eton College return in its place again, and also a new one from Slough; Beaconsfield, Princes Risborough, and Bletchley would also be useful.

OXFORD.

No changes; Gauges still required at Bampton, Burford, or Witney.

NORTHAMPTON.

No important change. Gauges required near Towcester, and in the whole N.E. of the county except near Stamford.

HUNTINGDON.

At all the stations reported in 1872 perfect records were kept during 1873, and no other stations are necessary except perhaps on the western side of the county where it joins Bedfordshire.

BEDFORDSHIRE.

In this county also no interruptions have occurred, and moreover three new stations have been organized, viz., Leighton Buzzard, Tempsford Hall, and Wrestlingworth. The northern part of the county, however, remains an absolute blank, there is not a single return from any station north of a line running across the county through Bedford and Tempsford, so that there is about 180 square miles in this county (joining a large blank portion in Huntingdon) without an observer.

CAMBRIDGE.

We are glad to report that the Mid-Level Commissioners have organized a set of stations which have greatly improved the representation of this county; and as their returns vary from 16·67 to 22·94 it would appear that the variation even in flat counties is by no means inconsiderable. We are also indebted to Mr. Miller for some new stations in the north of the county.

DIVISION IV.—EASTERN COUNTIES.

ESSEX.

The only record known to be discontinued is that at Wimbish, a station of secondary importance, but the only one between Braintree and Saffron Walden, a distance of seventeen miles. Gauges at Ongar, Burnham, St. Osyth, and Thaxted would be useful.

SUFFOLK.

With the exception of Yaxley (where the record has been discontinued since Jan. 1, 1874, for the singular reason that it had been continued for eight years) all stations in this county continue in full order. The only important neglected districts are near Lavenham and Halesworth. It is rather strange that there are no records from the watering-places on this coast, neither Aldborough, Southwold, nor Lowestoft (for Somerleyton is three miles inland).

NORFOLK.

In this county a most efficient supervision is exercised, and excellent arrangements are adopted by Mr. Du Port, with the cordial co-operation of the *Norfolk Chronicle*, in which is published monthly a table compiled by Mr. Du Port, and giving the fall on each day at thirty stations. This table is looked to with much interest by many besides the observers, among whom it promotes friendly emulation, and it is also very useful in rendering particularly easy the detection of any errors, and the tracing of special phenomena. Hitherto the stations have been mostly confined to a belt of country running E. and W. through Norwich; but we are glad to see that the belt is gradually widening, and we hope will eventually include even Cromer. A most useful approach to which is made by the new station at Letheringsett Hall. A new station was also started during 1873 at Ovington Rectory, Watton.

DIVISION V.—SOUTH-WESTERN COUNTIES.

WILTSHIRE.

Although, with the exception of Lacock, all the old stations are believed to be in operation, Imber is again complete, and we have two new returns, Compton Bassett and Trowbridge Waterworks, we cannot say that Wiltshire is properly represented. There is no station inside a line joining such distant places as Marlborough, Ludgershall, Amesbury, Melksham, and so round to Marlborough again, enclosing a tract of more than 200 square miles, and another nearly equal blank area lies north of Chippenham.

DORSETSHIRE.

By the welcome addition of Beaminster, and of a recently-started station at Ashmore, this county is left very fairly represented except near Poole, and in the north-west. The records at Dorchester and Frome Vauchurch, are terminated by the removal of the observers; one or both of these should be replaced.

DEVONSHIRE.

This large county retains its high position for efficient representation, but has met with a great loss in its weakest district. The death of Mr. Berry, of Chagford, leaves the north-eastern side of Dartmoor without a station, and not only so, but an area of some 260 square

miles, or from Prince Town to Crediton, and from Widdecombe to Oakhampton, and even Widdecombe is relegated to the supplementary table owing to a necessary change in the position of the gauge on July 1st, 1873. Moreover, we hear with regret that we shall shortly lose our only observer in the neighbourhood of Hartland. These, however, are almost the only drawbacks, and on the whole the distribution of the stations is most satisfactory. A table is published monthly by the *Western Morning News*, which contains the total fall at a considerable number of stations in this county and in Cornwall, and this doubtless tends to secure promptitude and care on the part of the observers, as well as to interest the public generally. A similar result is doubtless due to the papers which Mr. Pengelly, F.R.S., annually compiles from the data in these pages, and presents to the Devonshire Association for the Advancement of Science. It would occupy too much space to mention all the new stations, most of which, moreover, will be found in the general tables; but we cannot pass without comment the establishment of three stations in a district where we have long sought in vain for one. The north coast of the county is now provided with stations at Combe Martin, Martinhoe, and Glenthorn, Lynmouth; as therefore Exmoor is now surrounded on the west, we hope shortly to hear that it has been similarly treated on the Somersetshire side.

CORNWALL.

The record for Treharrock, which dates from 1853, is terminated by the removal of the observer, and that at Carclew by the accidental burning of the original M.S., of which no copy had been sent to head quarters. These are we believe the only failures; and, on the other hand, we are glad to welcome the record from Jacobstowe, to find Camelford again represented, as well as to receieve a promise for the present year of a record from the only gauge on the Lizard promontory, namely, that at St. Ruan Minor.

SOMERSET.

With the exception of two records in the vicinity of Bath, which are terminated, viz., Gay Street and Bathampton Lodge, there is no change whatever in the observers in this county—and there is still no station west of Wiveliscombe.

DIVISION VI.—WEST-MIDLAND COUNTIES.

GLOUCESTER.

No important change in this county, which is well represented,

except in the neighbourhood of Wickwar, in the Forest of Dean, and to the east of Cheltenham.

HEREFORD.

No county has so rapidly taken a foremost position in rainfall matters as Hereford. We are fortunate in having several able helpers in this county, in having so able and vigorous a representative as Mr. Stephenson, and the cordial support of that giant of the provincial press, the *Hereford Times*. Hereford was sadly behind; even if all its stations could have been shifted to the best possible positions, there would only have been one to each sixty square miles, and practically they were very far worse, for five out of the fourteen were within a radius of four miles round Hereford. The number now is nearly double, they are well spread over the country, and their results are published monthly in the *Hereford Times*.

SHROPSHIRE.

With the exception of the termination of the record at Meole Brace, near Shrewsbury, there is no diminution in our staff in this county; and there are three welcome additions in the vicinity of Wenlock Edge, viz., Cardington on the west side, and Staunton Long, and Larden Hall on the east side.

STAFFORDSHIRE.

The alterations in this county are not very important; the gauge formerly used at Waterloo Road has been removed to the Town Hall, and the death of Mr. Robson has stopped the record at Beau Desert. These deficiencies will, however, be more than covered by new stations at Shushions Manor; Lichfield; Stafford; and the Heath House, Cheadle.

WORCESTERSHIRE.

We are very glad to see a return from Upton-on-Severn, but desire to call special attention to the fact that from Evesham to Orleton is twenty-five miles, and from Malvern to Bromsgrove is nineteen miles, and that within this area, between 400 and 500 square miles, we have not a single observer.*

WARWICKSHIRE.

The alterations in this county are wholly augmentations, and include

* Since writing the above, we have been extremely glad to receive from Mrs. Burgess, of Worcester, a complete record for 1873, in resumption of that kept for so many years by her late husband. This goes far to fill the above blank, but the district is too large for us to rely solely on one gauge.

the four following:—St. Mary's College, Oscott; Blackdown Hill, Leamington; Willey Rectory, Lutterworth; and Camphill House, Nuneaton.

DIVISION VII. NORTH MIDLAND COUNTIES.

LEICESTER.

Last year we lost the useful station of Appleby, but happily its absence is atoned for by a new one at Ashby-de-la-Zouch. This year we have the more serious loss of Owston, which leaves a tract of country, in the east of the county, seventeen miles square without an observer. The other new stations do not affect this question, though very useful for other purposes, especially Market Harborough.

RUTLAND.

This little county, which might with ample margin be dropped in the blank portion of Leicestershire just mentioned, is becoming quite dotted with observers, and is amply provided.

LINCOLN.

There is much room for improvement in the representation of this large county; for although in the northern portion we have the valued co-operation of the Manchester, Sheffield and Lincolnshire Railway Company, there are still several areas of more than 200 square miles each, without stations. We are glad to have only lost one (Dr. Adam's at Boston) and to have three useful new ones, and the promise of two other very well placed ones—Tydd Gate, Sutton, and Partney, Spilsby, next year.

NOTTINGHAM.

Except in the neighbourhood of Tuxford this county is well provided with stations, its borders being guarded by those in surrounding counties. We have to regret the loss of the old station at Southwell through the death of Mr. Clay; and we also greatly regret to state that our suspicions, of the inaccuracy of his record, have been confirmed by the discovery that for an unknown number of years he had been using an erroneous measuring glass. The small amounts recorded by him had always been an enigma which our limited staff and funds had prevented our solving by examination of the instrument used.

DERBYSHIRE.

The removal of Mr. Wright from Ripley leaves a blank in the neighbourhood of Alfreton, and we have not yet succeeded in obtaining correspondents at Tideswell, Hartington, or Ashop Clough (N.E. of High Peak), in other respects the stations are well distributed. Long Lane and Melbourne are useful new stations in the south of the county.

DIVISION VIII. NORTH-WESTERN COUNTIES.

CHESHIRE.

No important changes in this county except the addition of Tarporley and (prospectively) of Crewe, each of which is upwards of seven miles from the nearest previously-established station.

LANCASHIRE.

In this busy county the value of rain is so fully recognised that ample details can always be obtained in the manufacturing districts, and indeed throughout the county there is scarcely (if at all) an area of even fifty square miles in which a record is not kept. The very important steps taken by the late Mr. R. T. Bywater in the extreme north of the county are fully explained in a subsequent article.

DIVISION IX. YORKSHIRE.

WEST RIDING.

Although this Riding contains more than ninety stations they are so concentrated in the manufacturing districts, that the northern portions of this great Riding (which it must be remembered contains altogether more than three thousand square miles) are not so well provided as they should be. In years not perhaps very remote an accurate knowledge of the rainfall of these northern dales will be of considerable importance. Considering the largeness of the staff there have been remarkably few alterations; for at present we only know of three. Dr. Dixon has left Tickhill, but the record continues with the same gauge in the old position. The record at Skipton Grammar School is terminated, and that at Coney Street, York, has been imperfectly kept. There are several useful new ones, of which probably Ilkley, and Drax near Selby, are the most important in a geographical sense.

EAST RIDING.

Like Lincolnshire on the other side of the Humber the East Riding has always been short of observers as compared with other parts of England. We have lost, through the death of Dr. Atkinson, the record from Clare House, but with three others in the immediate neighbourhood that is immaterial; on the other hand, we have a very important one from Driffield, and the promise of three from the coast (where we have long been trying to obtain observers), viz., from Hornsea, Dunnington and Bridlington. It is still most desirable that the interior of the Riding should be further occupied, for in this and the North Riding there is an area thirty-three miles by nineteen, or more than 600 square miles, or twice as large as Middlesex, dependent on the solitary (but well kept) gauge at Ganton Hall.

NORTH RIDING.

The north-eastern portion of this Riding has latterly received an accession of observing strength. The south-eastern barrenness has already been mentioned. In the centre we have lost (through the death of Dr. Atkinson of Hull) the important station of Thirsk. It is very desirable that a new station be started in the neighbourhood of Thirsk or Easingwold. The extreme west of this Riding happened to be lately absolutely without one station in an area as large as Middlesex. It is therefore most fortunate that the Rev. F. W. Stow has been presented to a living almost in the centre of it, for his well-known skill and zeal in whatever he undertakes leaves no doubt on our mind as to a great improvement in the course of a year or so when more weighty matters have been attended to.

DIVISION X.—NORTHERN COUNTIES.

DURHAM.

In this and the adjoining county of Northumberland Meteorology has received a severe check in the retirement of Mr. Wheeler from the editorship of the publications of the Tyneside Club. It is perhaps too early to ascertain the full effect of a resignation which is as much regretted by Mr. Wheeler as by every one else. We hope that some able volunteer will step forward to take his place, and in the interim we have endeavoured with gratifying success to keep up the continuity of the records. At the present time we are not aware that one has fallen

through in Durham; the two which will be missed, viz., St. John's Wolsingham and Seaham Hall, being imperfect only from temporary causes.

NORTHUMBERLAND.

Owing principally to the cause previously mentioned, there are, at the time of writing this, seventeen records not received, but we have little doubt that they will mostly be gathered in. No important new returns are in hand, but two records of great interest have lately been commenced by Mr. Hughes, of Middleton Hall, near Wooler, who, hearing Mr. Symons call attention, at the Bradford Meeting of the British Association, to the non-existence of any station on the Cheviots, north-east of Deadwater, kindly undertook to have two sets of observations taken upon his estates, one daily at Middleton Hall, about 400 feet above the level of the sea, and a monthly one on the very top of Cheviot itself.

DIVISION XI.—MONMOUTHSHIRE AND WALES.

The only important losses in this division, as far as we are at present aware, are the mountain gauges at Llanwddyn, and Major Mathew's station at Festiniog. We also regret that the record for Pen-y-gwryd was not trustworthy until April. Against these losses we however have the pleasure of setting several important gains. Lord Dynevor's return from the north-east of Carmarthenshire is a valuable acquisition, and so are the reports from St. David's College, Lampeter, and from Llanwrtydd. In fact, these three stations form an approximately equilateral triangle with sides eighteen miles in length, and yet neither of them is within ten miles of any existing station. We are sorry that Aberystwith, which we believe both in learning (for it is the seat of the new University), and as a health resort, aspires to a prominent position, has now for several years been left without a single observer. There is a very large unoccupied tract from Montgomery through Corwen to Llandudno, and several smaller ones which we trust private energy will soon fill up; for instance, Mr. Whitehall Dod, of Llannerch, has most kindly occupied several spots on the northern coast, and partial returns from Nant near Rhyl, and Bryn Ewryn on Colwyn Bay have been received.

SCOTLAND.

DIVISION XII.—SOUTHERN COUNTIES.

This Division is very well provided with stations, but we are sorry to have lost that at South Cairn, Stranraer, through the increasing ill-health of the observer. We should be glad of a fresh representative in that neighbourhood. The only other parts in which fresh stations are much required are, East Kirkcudbright, Upper Eskdale, and East Roxburgh. It is rather aggravating, that although instruments have long been provided gratuitously for Mowhaugh, the records are scarcely ever either trustworthy or complete.

DIVISION XIII.—SOUTH-EASTERN COUNTIES.

This division is also very well supplied with observers, except in one singular belt running E.N.E. from Peebles to the sea (including the Lammermuir Hills), and measuring about 40 miles by 10 miles.

DIVISION XIV.—SOUTH-WESTERN COUNTIES.

No important alterations in this district, in which the stations are sufficiently numerous, and fairly distributed. We are sorry to be unable to obtain any record from the reservoir at Shotts, and should be glad of information to whom application should be made for copy of the records, which we believe are kept there.

DIVISION XV.—WEST MIDLAND COUNTIES.

Thinness of population begins to tell in this division. We are indebted to Mr. J. B. Lawes, F.R.S. (of Rothamsted) for three new stations in the vicinity of Ben Cruachan, and have also been favoured with other new records, while we have only lost (temporarily) that for Oban. We are, however, still too dependent upon lighthouse returns, and much require new stations in the east of Mull, in Cantire, Coll, Colonsay and Jura, and between Dunoon and Oban.

DIVISION XVI.—EAST MIDLAND COUNTIES.

With two exceptions this division is sufficiently provided; but the exceptions are important ones. Forfarshire is and always has been an utter blank, except in the south and east, and as it joins a very neglected part of Aberdeenshire, prompt steps should be taken to remedy this deficiency.

The other blank is in N.W. Perthshire, the district in which a number of gauges were placed by direction of Lord Breadalbane, but respecting which no information can be obtained. The new stations on the Highland railway materially lessen the deficiencies of this district, but there is an enormous area, 85 miles long by 30 miles broad, extending N.W. from Crieff across Loch Tay, Loch Lydoch, and (in Division XVIII.) across the Caledonian Canal: 2550 square miles in area without a single gauge. For 1873 the blank area is even larger, extending on its north-eastern margin to the Highland stations, but through the good offices of the Rev. J. E. Cross (of Appleby), we are glad to state that a very important and useful station has been established, under the care of the Hon. G. Elphinstone, at Innerhadden, at the east end of Loch Rannoch.

DIVISION XVII.—NORTH-EASTERN COUNTIES.

The Aberdeenshire stations have a great tendency to group themselves in a band running westward from Aberdeen, and in a cluster in the N.E. of the county. We should be glad to see a few fresh ones in the south of the county, and also between old Meldrum and Huntley. In all other parts they are sufficiently close.

DIVISION XVIII.—NORTH-WESTERN COUNTIES.

We have already (under Division XVI.) called attention to the large tract of central Inverness which is absolutely without a station; there are also three smaller ones, viz. (1) Strath Dern; (2) N.W. of Ben Wyvis; and (3) in the watershed of Loch Maree. With these exceptions the district is well provided; remarkably so, considering the thinness of the population.

DIVISION XIX.—NORTHERN COUNTIES.

Caithness and Sutherland, considering their extent, are the worst represented counties in Scotland, and only equalled by one or two in Ireland. Excepting a few in the S.E., Sutherland has only two stations, both on the N.W. coast, and there is an area of nearly 30 miles by 60 miles without a single station. Caithness is for its size equally badly provided; there is not a single station, except on the coast. The Orkney and Shetland Isles are well provided.

IRELAND.

DIVISION XX.—MUNSTER.

With the exception of detached groups of stations in S.W. Kerry and E. Cork, this province is the worst provided with observers of any part of the British Isles. Not only is there no return from the large county of Limerick, but there is none from N. Kerry, and only one from Clare. The area, without a single return, is of irregular shape, but when we state that a square can be inscribed within it, each of whose sides is 60 miles in length, some idea may be formed of the readiness with which we should accept any assistance towards filling it up.

DIVISION XXI.—LEINSTER.

This province is much better provided with stations, and it is remarkable and satisfactory to notice that every return received for 1872 is continued through 1873, while there are a few welcome additions. There are still no records from Kildare and Longford, and a station between Trim and Mullingar would be very useful.

DIVISION XXII.—CONNAUGHT.

There is a dearth of stations in the west, but otherwise, owing to their wide dispersion, the few records which are received from this province are sufficient for most purposes. We are very sorry that Captain Buckle's removal from Belclare has caused the abrupt termination of that important record.

DIVISION XXIII.—ULSTER.

Owing to the removal of Dr. Ashe to Londonderry, the Letterkenny record is relegated to the supplementary table, the gauge having been returned from Sprackburn to the Glebe in June. Several new and important stations have been organised during the past year, among which are two very useful outposts—Dunfanaghy on the extreme N.W., and Ballyshannon on the S.W. of Donegal. There are also several others inland, so that, except in E. Londonderry and N. Antrim, there are no important vacant spaces.

ON THE SERIES OF OBSERVATIONS ESTABLISHED IN THE WATERSHED OF CONISTON LAKE AND ITS VICINITY, BY THE LATE R. T. BYWATER, ESQ.

I have already expressed my extreme regret that the compilation of this note has devolved upon me, and though this regret arises mainly from the loss of an excellent observer and a personal friend, it is augmented by the consciousness that the good work he had started has been nipped in the bud, and that for lack of information it is impossible for me, or for any one else, to do justice to what he had intended or even to what he has done.

Judging from what I have seen, it would appear that Mr. Bywater was one of those who do much and say little.

On the back of his return for 1872, Mr. Bywater entered the following brief remark :—

"I have distributed in this neighbourhood one dozen rain gauges, so that I hope another year to send you several additional records."

When in the district last autumn I had the pleasure of a short chat with Mr. Bywater, but having promised to prepare a full statement of what had been done for the present publication, he led our conversation almost wholly to a discussion on the additional points which should be seized. I pointed out the useful lessons which might be learned from a series of gauges at various heights on Coniston Old Man, and we parted with the mutual understanding that he would prepare and I would publish a *resumé* of what had been done, and that he would ascertain the feasibility of carrying out the experiments upon the "Old Man." Fortunately I, from mere curiosity asked where all the twelve gauges were gone to, and he wrote down three or four addresses on a piece of waste paper, and then he stopped and laughingly added—"There are a few, but you shall hear all about it in due and proper time." Little did either of us think that that scrap of paper would be the only note he was ever to write upon the subject.

My own difficulties in ascertaining what had been done have been seriously increased by the fact that no notes respecting these gauges were found among Mr. Bywater's papers, and also by the loss during the same year of the only other observer at Coniston whose record extends over any number of years, viz., J. Garth Marshall, Esq. His son, Victor Marshall, Esq., has, however, kindly taken much trouble in the matter, and it is mainly through his efforts that I have traced nine out of the twelve gauges.

List of gauges distributed by the late R. T. Bywater, Esq.

			REMARKS.
1	Broughton-in-Furness ...	Rev. F. A. Malleson ...	Record perfect for 1873.
2	Coniston Parsonage	Rev. C. Chapman	,, ,, ,,
3	Hawkshead	W. Lane, Esq., M.D....	,, ,, ,,
4	Woodland Parsonage	Rev. E. C. Shawfield...	,, ,, ,,
5	The Wray	Rev. W. R. Morris ...	,, ,, ,,
6	Brathay Hall, Ambleside...	G. Redmayne, Esq....	Gauge supplied Jan. 14th, 1873. Record complete from that date.
7	Holywath	Mr. R. Aitken	
8	Highfield, Hawkshead ...	W. H. Heelis, Esq..	Record complete from April, 1873.
9	Monk Coniston	T. Evennett, Esq....	Record complete from April, 1873.

I hope that this notice will stimulate the above-named gentlemen to continue their assistance, and also that some one will adopt the suggested system of observations on the slopes of the "Old Man."

From one offer which I have already received the principal difficulty appears to be the cost of the instruments. If this is really the case, I have no doubt that it will be surmounted, as a slight tribute to the memory of the original proposer.

I shall also be glad to learn where the other three gauges have been placed.

OBITUARY.

We regret that the following list, although considerably shorter than that which it was our duty to give last year, is still a long one, and includes the names of several very careful observers, five of whom have been observers for more than a quarter of a century. We are, however, very glad to be able to say that, with the single exception of Chagford, the stations of which the records are terminated are of far less importance than those which will be continued, mostly by relatives or friends of the deceased.

In the following table C *before* any date denotes the Commencement of observations; C *after* a date denotes that the series is continued; T indicates the termination of observations at the station to which it is appended.

	Period of Observations.
Anderson, Mr. J. Hamilton Street, Greenock	C 1869—1872 T
Atkinson, A. O., Esq., LL.D. Clare House, Hull	C 1864—1872 T
Atkinson, A. O., Esq., LL.D. Gas Works, Thirsk	C 1866—1872 C
Atkinson, A. O., Esq., LL.D. Ruswarp, Whitby	C 1866—1872 C
Berry, R. L., Esq., Chagford, Exeter	C 1862—1872 T
Bywater, R. T., Esq., Monk Coniston	C 1865—1866 T C 1869—1873 C
Campbell, Dr. J., Largs, Ayrshire	1842—1872 C
Charrington, F., Esq., Brewery, Mile End	C 1862—1872
Clay, W. W. P., Esq., Southwell, Notts	C 1844 imp—1873 imp T
Colquhoun, A. C., Esq., Chartwell, Westerham	C 1862 imp—1872 T
Dodgson, T., Esq., Stubb House, Winston	C 1856—1867 T
Dodgson, T., Esq., Thorp Grange, Greta Bridge	C 1868—1873 C
Farnie, Mr. P., Lochleven Sluice, Kinross	C 1842—1871 C
Gibson, C. M., Esq., Norwich	C 1869—1870 T
Marshall, J. G., Esq., Coniston	C 1837—1872 C
Mayne, Rev. C., Killaloe, Clare, Ireland	C 1846—1873 C
Overman, R., Esq., Egmere Wells	C 1853—1873 imp T
Paget, C., Esq., Ruddington Grange, Nottingham	C 1866 imp—1872 C
Paterson, A., Esq., Meadowfield, Costorphine, N.B.	1860—1872 C
Robson, W. R., Esq., Beau Desert, Staffordshire	C 1869 imp—1872 T
Shipp, W., Esq., Blandford, Dorset	C 1864—1872
Taylor, J., Esq., Gas Works, Oldham	C 1861 imp—1873 C
Thompson, W., Esq., Park End, Workington	1867—1872 T
Turner, T., Esq., Plas Brereton, Carnarvon	C 1864 imp—1872 T

RAINFALL AND METEOROLOGY

OF

1873.

ON THE METEOROLOGY OF 1873.

WITH NOTES OF SOME OF THE PRINCIPAL PHENOMENA.

[These Notes should be read in conjunction with those on Heavy Rains in 1873, on page 101.]

JANUARY.

1st. Thunderstorm, with hail, at *Pevensey* (II.) Gale at *Lymington.* At *Diss* (IV.) there was a heavy gale from S. during the night, lasting more or less till the 5th. There was also a thunderstorm at *Ludlow* (VI.), and a severe one at *Clonmel* (XX.); wind S.

2nd. Thunderstorms again in several places; *Lymington, Ludlow,* (VI.) *Lowthorpe,* near *Hull* (IX.); heavy at 2.30 p.m., at *Presteign,* (XI.), *Heyope,* at 8.30 a.m.; *Clonmel* (XX.), severe at night. Thunder was heard at *Clawton* (V.) and *Buckish, Bideford* at 8 p.m. Lightning at *Upfield, Stroud* (VI.) at night in S.S.E.

3rd. Thunderstorm at *Lymington.* At *Moor Hall, Harlow* (IV.) heavy hail and rain commenced at 0.45 p.m., and in 1 h. 20m. 0·76 in. fell; much damage done. *Sprowston* (IV.) Distant thunder at 4 p.m. *Melbury* (V.) Very stormy; loud thunder to N.E., lightning and heavy rain; low grounds flooded, and telegraphic communication stopped; heavy thunder also at *Sansaw* (VI.) At *Henley-in-Arden* (VI.) a tremendous thunderstorm; loud thunder, very vivid lightning, rain, hail, and snow; its chief force seems to have been to the West and North of this station, especially near Birmingham. At *Oscott, Birmingham* (VI.) Thunderstorm at 9.45 a.m., and 2.45 p.m. *Coston, Melton* (VII.) Hail and rain at 11 a.m., and thunder at 3 p.m. Thunder also with heavy rain at *Branston, Lincoln* (VII.) At *Bucknall, Horncastle* (VII.) much lightning before daybreak. Heavy

thunderstorm at *Hull.* Distant thunder at *Melrose* (XII.), and thunderstorm at *Waterford* (XX.) in the morning.

4th. Gale, with heavy rain at several stations in the S. and W. of England.

5th. Hail at *Winchmore Hill* (I.) At *High Roding, Dunmow* (IV.) a short sharp squall of wind and rain from west, culminating in a furious blast about 2.40 p.m. *Upfield, Stroud* (VI.) High S.W. wind at night. Aurora was seen from *Winchmore Hill* (I.) and *Melrose* (XII.)

7th. Aurora seen from *Winchmore Hill, Lymington,* and *Diss.*

12th. *Druid, Ashburton* (V.) Fine lunar rainbow.

13th. High wind in E. and S. of England, with rain.

18th. *Hanworth* (I.) Sudden fall of barometer. *Lymington* (II.) Gale. Excessive rain general over England and Wales, but Shropshire seems to have escaped, for at *Adderley* (VI.) only 0·45 in. fell, and the report from *Sansaw* (VI.) is "great and sudden fall of the barometer without anything to account for it, falling lower than ever before known at this place." *Diss* (IV.) Heavy gale, rising suddenly at 6 p.m., and subsiding with equal suddenness at 6 a.m., on 19th. Barometer fell 1·24 in. *Bideford* (V.) Gale from S.W. *Coston* (VII.) Heavy storm in the night, with thunder and lightning; great fall of barometer, and hail at noon. *Bucknall* (VII.) Violent storm at night. *Elterwater* (X.) Very heavy rain; 2·79 fell between 9 a.m. and 9 p.m. *Melrose* (XII.) Gale for twelve hours from S.W., with heavy rain from 6 a.m. to 9 p.m.

19th. *Winchmore Hill.* Vivid lightning in evening; thunderstorm at *Lymington,* also at *Oxford,* with hail and rain. Lightning at *Sandy* (III.) Hail at *Diss* at 4 p.m. Lightning at *Ashburton,* vivid at 8 p.m., with heavy rain, wind, and snow. At *Bideford* (V.) there was thunder at 11 p.m., with snow, sleet, and hail. Thunderstorm at *St. Austell* (V.) at night, and very stormy. *Upfield* (VI.) Heavy hail storm at 9 a.m.; thunder at noon. *Oscott* (VI.) Strong gale from 2 to 3 a.m. *Coston* (VII.) Hail at 3 p.m. *Buckden* (IX.) Thunder. *Lowthorpe* (IX.) Snow 1½ in. deep. *Middlesborough* (IX.) Heavy S.W. gale, with sleet. *Casterton* (X.) Remarkable barometric depression, and that apparently without much atmospheric disturbance; a little snow and wind. *Elterwater* (X.) Thunderstorm in evening; hail and snow in the earlier part of the day. Barometer at 11 p.m. marked 27·952 in. at 303 ft. above sea level. *Llanfrechfa* (XI.) Thunderstorm in evening, with very low barometer. *Heyope* (XI.)

Thunderstorm. *Bushy Hill, Cambuslang* (XIV.) Snow showers. *Ballinasloe* (XXII.) Heavy snow.

20th. *Winchmore Hill.* Vivid lightning in evening, and distant thunder at 8.30 p.m. *Forest Lodge* (II.) Thunderstorm, with hail; barometer (at 32°) 28·27 in. *Sandy* (III.) Lightning. *Wetherden* (IV.) Much lightning. *Diss.* Slight snow. *Sprowston* (IV.) Lightning. *Druid Ashburton* (V.) Snow 4 in. deep; lightning at 5 p.m. *Trevarrick* (V.) Stormy, with hail and snow. *Poughill* (V.) Thunderstorm, snow, hail, rain, and gale; barometer lower than I have known for 15 years; wind N.W. *Saul Lodge* (VI.) Gale; barometer 28·44. *Upfield* (VI.) Snow storms. *Oscott.* Barometer at 298 ft. 28·20 at 6 p.m. *Buckden.* (IX.) Thunder, hail, snow, and sleet. *Lowthorpe* (IX.) Severe frost. *Heyope* (XI.) Barometer still very low; thunder at intervals throughout the day.

21st. *Bromley Common* (II.) Lightning. *Sprowston* (IV.) Heavy fall of snow from 5 to 7 a.m.

22nd. *Bucknall* (VII.) Snow and rain from S. in morning, and from N.W. at night.

24th. *Eastbourne* (II.) A thunderstorm, but quite local.

25th. *Addington* (III.) Dense fog in morning. *Sprowston* (IV.) Sharp frost and fine, but in *Norwich* dense fog from 9 to 10.30 a.m. *Melrose* (XII.) Thunderstorm at 9 p.m.

26th. *Fermoy Gas Works* (XX.) Very heavy rain (3·42 in.), gauge partly upset by flood.

30th. *Imber* (V.) Deep and drifted snow. *Druid Ashburton* (V.) Snow 3 in. deep.

FEBRUARY.

1st. *Pevensey* (II.) Gale from S.E. *Shaftesbury* (V.) Heavy fall of snow, and very rough wind. *Dartmoor* (V.) Very heavy snow, with gale in the afternoon; owing to the depths of the drifts progression was physically impossible; we had no communciation with the rail, and no post. *Buckish* (V.) Gale from S.E. at night, with heavy snow. *Trevarrick, St. Austell* (V.) Snow, hail, and fearful gale from N. and E. *Casterton* (X.) Stormy day and cold; heavy gale at night. *Melrose* (XII.) Aurora at 8.20 p.m. At *Bruce Villa, Clonmel* (XX.) a violent snowstorm began at 3 a.m., and continued with great fury until 9 a.m., 2nd; snow about 16 in. deep, but drifted to 3 and 4ft. in the streets, and in the country to 10 and even 12 ft. (nothing like it since January 27th, 1855), wind E.

2nd. *Muswell Hill* (I.) Snow 6 in. deep on the level, patches of which remained throughout the month. *Winchmore Hill* (I.) Snow nearly 1 ft. deep. *Sandy* (III.) Snow 6 in. deep, with high wind. *Sprowston* and *West Tofts* (IV.) Snow. *Melbury* (V.) Very stormy, roads blocked by snow; the post cart had to be left behind, and the mails brought forward on horseback. *Upfield* (VI.) Gale from E., with snow, which, in drifts, was 7 ft. deep. *Sansaw* (VI.) Snow, with high wind. *Mansfield* (VII.) Heavy snow. *Middlesborough* (IX.) Snow. *Llanfrechfa* (XI.) Light drifting snow all day.

3rd. *Beadlam Grange* (IX.) An exceedingly stormy day, upwards of 14 in. of snow.

7th. *Eastbourne* (II.) Remarkable combination of halos and parhelia at 9 a.m.

9th. *Pevensey* (II.) Gale from E. Snow at *W. Tofts* and *Sprowston* (IV.)

10th. Snow at *West Tofts* (IV.) and *Middlesborough* (IX.)

16th. *Melrose* (XII.) Bright aurora at 9 p.m.

18th. Barometer excessively high, especially in the S.E. of England, at *Addiscombe* (II.), 30·799 in. reduced to sea level at 9 a.m., with at *Diss* (IV.) dull weather and cold southerly wind.

21st. Fog at *Ashburton* and *Dartmoor* (V.), at the latter station it froze as it fell, forming a strange and beautiful phenomenon. *Stanley, Wakefield* (IX.) Very cold from the S.

22nd. Snow at *West Tofts* and aurora at *Melrose* at 10 p.m.

23rd. Very cold, with much snow generally. *Audley End* (IV.) Min. 16°·0.

24th. *Addiscombe* (II.) Snow began at 7 a.m. and by 9.30 a.m. was 3½ in. deep on the gravel path. *Oxford* (III.) Snow from 6.30 a.m. to 0.30 p.m., average depth 5½ in. *Ashburton* (V.) Dust ice falling all day, heavy snow. *Dartmoor.* (V.) Snow all night of 23rd, and at 11 a.m. 24th, heavy rain, freezing as it fell; at 6 p.m. all the snow and portions of the ground (where there was no snow) coated over with continuous sheets of frozen rain more than half an inch thick. *Clawton* (V.) The rain which fell this day became ice on the ground, trees, &c. *Holker* (VIII.) Snow 6 in. deep. *Broughton Hall.* Snow 4½ in. deep fell in four hours. *Middlesborough* (IX.) Minimum temperature 6°. *Gainsford* (X.) Minimum in air 15°, on grass 5°. *Casterton* (X.) Minimum temperature 8°·5.

25th. *Pevensey* (II.) Gale from S. *Wetherden* (IV.) Very rapid thaw. *Ashburton.* Misty. *Bucknall* (VII.) Heavy snow from S.S.E.

Gainford. Wind at 9 a.m. W.N.W., at 10 a.m. backed to S., thence to S.S.E. and E.S.E., blowing hard, with snow, till 1 p.m. *Woodlands, Elterwater* (X.) In the early part of the day snow fell to the depth of 7 inches, followed by heavy rain at night. In Scotland the fall was chiefly snow.

26th. *Ashburton.* Hurricane from N.E. Snow all gone, and barometer very low. *Dartmoor.* Forked lightning, without thunder.

27th. *Dartmoor.* Sheet lightning.

28th. *Buckish.* (V.) Snowstorm at 10.30 p.m., followed by heavy rain. *Moorside, Halifax* (IX.) Distant thunder.

MARCH.

1st. *Sansaw* (VI.) Snow and rain, with high wind. *Melrose* (XII.) Snow.

5th. Lunar halos at *Halifax* (IX.) and *Melrose.*

7th. Gale at *Llanfrechfa* (XI.)

8th. *Bromley* (II.) Hail.

9th. Thunderstorm with heavy rain at 6·45 p.m. at *Druid Ashburton* (V.) Snow. Hail at *Casterton* (X.) Snow at *Cambuslang* (XIV.)

10th. *Addington* (III.) Loud thunder. *Sandy* (III.) Thunder without lightning at night. *Diss.* (IV.) Heavy snow in early morning. *Buckish* (V.) Slight snow. *Sansaw* (VI.) Snow. *Coston* (VII.) Severe snow storm. *Elterwater* (X.) Slight snowball showers. *Llanfrechfa* (XI.) Violent thunderstorm from 5·15 to 5·30 p.m.

11th. *Wetherden* (IV.) Thunderstorm with hail. *Diss.* (IV.) Frequent hailstorms and thunderstorms in the afternoon. *Sansaw* (VI.) Snow. *Bucknall* (VII.) Thunder and heavy snow. *Achanault* (XVIII.) Snow.

13th. *Beaminster* (V.) A little snow. *Tavistock* (V.) Temperature fell to 23°. *Bruce Villa,* Clonmel (XX.) Temperature fell to 26°.

14th. *Addington Manor* (III.) Snow.

15th. *Pinner Hill* (I.) Gale. *Addington* (III.) Snow. *Beaminster* (V.) Very stormy evening. *Holne Vic.* (V.) Snow. *Buckish* (V.) Snow. *Poughill* (V.) Gale from S.E. *Hexworthy* (V.) Gale from E. *Sansaw* (VI.) Snow.

16th. *Buckish* (V.) Snow. *Bath.* Snow began at 2 a.m., followed at 5 a.m. by rain, which continued till 9 p.m., total amount in 19½ hours 1·54; wind E.N.E.

20th. *Upfield* (VI.) Heavy thunder and lightning from N.N.E. to S.E. from 7 to 8 p.m.

21st. *Mansfield* (VII.) A rather heavy storm of snow in the night.

22nd. *Addington* (III.) Snow. *Wetherden* (IV.) First swallow, no more seen for several days.

25th to 28th. Fogs prevalent at low stations.

29th. *Ashburton* (V.) Thunder at night.

30th. *Bromley* (II.) Thunder in evening. *Hailsham* (II.) Thunder and rain.

APRIL.

1st. Aurora seen from *Harrow* (I.) and *Forest Lodge* (II.)

3rd. *Forest Lodge* (II.) Two remarkable parhelia seen about an hour after sunrise. *Oscott* (VI.) Large lunar halo. *Stanley* (IX.) Martins seen. *Melrose* (XII.) Hail showers; double halo at 9 p.m., aurora at 10 p.m.

4th. *Holehouse, Patna* (IV.) Cold with hail showers. *Budgate* (XVIII.) Snow.

5th. *Oxford* (III.) and *Sprowston* (IV.) Hail. *Melrose.* Lunar halo 9 p.m.

6th. Hail at *Pinner Hill* (I.) Snow and hail at *Winchmore Hill* (I.) Distant thunder at *Hailsham* (II.) Thunder at *Ipswich.* Thunder, rain and snow at *Wetherden.* Hail and snow at *West Tofts* (IV.) *Oscott* (VI.) Hail, snow and sleet. *Coston* (VII.) Very squally all day. *Branston, Lincoln.* Remarkable thunderstorm with hail half-an-inch to 1 in. in diameter, 0·20 fell in five minutes. *Holker* (VIII.) Thunderstorm at 2 p.m. *Stanley* (IX.) Hail. *Beverley Road, Hull* (IX.) Heavy thunderstorm with hail, rain, and snow. *Elterwater* (X.) and *Melrose* (XII.) Hail.

7th. *Bromley* (II.) Hail and sleet. *Llanfrechfa* (XI.) Storm of wind and rain at 11 p.m.

8th. *Winchmore Hill* (I.) Hail.

9th. Snow on *Dartmoor.*

10th. Cuckoo heard at *Mells.* (V.)

12th. Swallows seen at *Mells,* and on 14th at *Zeal Monachorum* (V.) and *Stanley.* (IX.)

15th. Lightning at *Winchmore Hill* (I.) Thunder at *Sandy* (III.) At *Breinton, Hereford,* distant thunderstorm in E.N.E. at 2 p.m., continuing some hours, and passing to N. by E. at 6 p.m.; lightning in E.

in evening. *Oscott* (VI.) Thunder at 3·45 p.m., lightning 8 to 9 p.m. *Coston* (VII.) Thunderstorm from 4·30 to 5·7 p.m.

16th. *Winchmore Hill.* Thunderstorm from 2 to 3 p.m. *Hailsham* (II.) Thunderstorm at 9 p.m. *Addington Manor* (III.) Violent thunderstorm in evening, with hail 0·75 in diameter. *Sandy.* Heavy thunderstorm. *Wetherden* (IV.) Very warm, thunder. *Sprowston.* Distant thunder in W. in afternoon. *Breinton* (VI.) No storms here, but two series of thunderstorms passed, one on each side, one along the W. horizon from S.W. to N.W., and the other northwards in E.N.E. Gusty wind from N.E. on earth's surface, but upper current from S. *Oscott.* Lightning from 7 to 9 p.m. *Coston* (VII.) Distant thunder in afternoon. *Llanfrechfa* (XI.) Much lightning at night, no thunder. *Brecknock.* Tremendous rain. *Heyhope.* Violent thunderstorm with heavy rain. *Twyford* (XXI.) Distant thunder at 2 p.m.

17th. *Leny, Callander* (XVI.) First swallow seen.

18th. *Stanley, Wakefield* (IX.) Saw first swallow. Brilliant aurora seen from *Scarborough and Melrose.*

19th. Aurora seen at several stations. Distant thunder at *Twyford* (XXI.)

21st. *Holehouse* (XIV.) Sharp frost.

22nd. *Buildwas, Ironbridge* (VI.) Sharp thunderstorm 2·40 to 3·20 p.m., believed to be quite local.

23rd to 26th. Sharp frosts general, with much snow and hail.

30th. Cuckoo heard at *Branston* (VII.)

MAY.

3rd. Thunderstorm at *Diss* (IV.) Thunder at *Hillington* and *Sprowston.* Thunderstorm at *Bucknall* (VII.) Heavy thunder with hail and rain at *Mansfield, Halifax* (IX.) Heavy hailstorm with thunder.

6th. Martins first seen at *Harrow* (I.) *Coston* (VII.) Hailstorm at 3·30 p.m. followed by thunder.

8th. Thunderstorm at *Winchmore Hill* (I.) between 5 and 6·30 p.m. *Diss.* (IV.) Thunderstorm at 2·30 p.m. *Sprowston.* Distant thunder. *Cessnock Park* (XIV.) Thunder.

9th. *Addington* (III.) Nightingale first heard; clap of thunder at 2·40 p.m. *Wetherden* (IV.) Thunderstorm.

12th to 20th. Very cold, snow in many places, and sharp frost damaging wall fruit, potatoes, and bedding plants.

22nd and 23rd. Slight thunderstorms in Eastern counties.

26th. *Sandy* (III.) Thunder. *Coston* (VII.) Thunderstorm at 7·30 p.m. *Bucknall.* Thunderstorm. *Llanfrechfa* (XI.) Distant thunder.

27th. *Winchmore Hill* (I.) A series of thunderstorms passing to N. between 10·30 a.m. and 4·30 p.m. *Addington* (III.) Thunderstorm with hail and heavy rain at noon. *Sandy.* Heavy thunderstorm.

JUNE.

1st. *Glengorm* (XV.) Mirage, with inverted refraction of distant islands, including even parts not ordinarily visible.

3rd. *Addington* (III.) Thunder. *Court Barn* (V.) Heavy thunder and rain a few miles S. and E. of this. *Upfield* (VI.) Thunderstorm passed E. of this from S.E. to N.E. between noon and 1 p.m. *Oscott.* Thunderstorm. *Coston* (VII.) Distant thunder in afternoon. *Calcethorpe.* Thunder. *Mansfield.* Thunderstorm at 6. p.m. *Holker* (VIII.) Thunder. *Halifax* (IX.) Thunderstorm at 9 p.m. *Woodlands* (X.) Thunderstorm. *Llanfrechfa* (XI.) Thunderstorm 1.30 to 2 p.m. *Castle Malgwyn.* Thunderstorm. *Glengorm Mull* (XV.) Thunderstorm.

4th. *Winchmore Hill* (I.) Thunderstorm with heavy rain from 4.50 to 5.10 p.m. *Forest Hill* (II.) Thunderstorm 4.15 to 5 p.m. Thunder at several stations in the S.W. of Scotland.

5th. *Kilworthy* (V.) Heavy rain, 1·60 in three hours.

11th. *Holehouse* (XIV.) Thunderstorm with hail.

12th. *Upfield* (VI.) Slight thunderstorm at 5 p.m. from S.E. *Melrose* (XII.) Distant thunder, *Bushy Hill* (XIV.) Distant thunder from S.W. to N. *Dalwhinnie* (XVI.) Thunder at noon.

13th. *Winchmore Hill.* Distant thunder at 4 p.m. *Addiscombe* (II.) Distant thunder at 3·20 p.m.; heavy thunderstorm from 3·40 to 4·30 p.m. *Forest Hill.* Thunderstorm 4 to 5 p.m. *Addington* (III.) Thunder. *Oxford.* Thunderstorm. *Diss.* (IV.) First hay carried. *Imber* (V.) Thunderstorm and 1·30 in. of rain; none a few miles off. *Tickencote* (VII.) Violent thunderstorm, a tree struck, and one of the church bells rendered useless. *Bucknall.* Thunder. *Woodlands* (X.) Thunderstorm. *Llanfrechfa.* Thunderstorm at 11 a.m.

14th. *Langtree Wick* (V.) Very fine aurora with streamers between

10.10 p.m. and midnight. *Coston* (VII.) Thunder at 6·30 a.m. and thunderstorm at 3.30 p.m.

18th. *Melrose* (XII.) Distant thunder.

22nd. *Winchmore Hill.* Distant lightning in S.E. and S. from 10·30 p.m. to midnight.

25th. *Druid, Ashburton* (V.) Red aurora with streamers at 9 p.m.

27th. *Melrose* (XII.) Gale in evening.

29th. *Muswell Hill* (I.) Heavy rain 4.10 to 7.30 p.m. *Addiscombe* (II.) Thunderstorm from 4 to 7 p.m. *Riverhead.* Heavy rain 6.15 to 8 p.m. *Forest Hill.* Distant thunderstorm 6.15 to 6.21 p.m. *Addington* (III.) Wind S.E., about 3 p.m. thunderstorm and excessive rain (2·65 in.) *Oxford.* Thunder between 3 and 4 p.m. *Broughton, Banbury.* Heavy rain 1·45 in., most of which fell between 4.35 and 5.10 p.m. *Sandy.* Thunder and rain. *Wetherden* (IV.) Between 8 and 11 p.m. 1·00 in. of rain fell. *Sprowston.* Warm and fine till 2 p.m., then dull, slight rain at 7 p.m., very heavy from 10 to midnight, ceased at 2 a.m., total 1·01. *West Tofts.* Heavy rain, but no thunder. *Druid* (V.) Heavy thundershower at noon. *Oscott.* (VI.) The wind backed from S. at 9 a.m., to E. at 2.30 p.m., and to N. at 6 p.m.; rain began at 2.40 p.m. and fell continuously to 9 p.m., when it measured 1·73, it continued through the night and amounted to an additional 1·04, making up to 9 a.m., 30th, 2·77. *Belmont Villas, Leicester* (VII.) Severe thunderstorm, rain 4.30 p.m. to 7 p.m. 1·00. 7 p.m. to 10 p.m. 0·30, 10 p.m. to 9 a.m., 30th, 0·96 total. *Stanley* (IX.) Heavy rain began 7 p.m. *Llanfrechfa* (XI.) Thunderstorm from 2.30 to 3.30 p.m.

JULY.

3rd. Heavy thunderstorms at midnight in *Lincolnshire,* and short heavy rain (0·25 in. in ten minutes) at *Melrose* (XII.) at 3 p.m.

4th. Slight thunderstorm prevalent in the Eastern counties in afternoon.

11th. *Bucknall* (VII.) Thunderstorm in afternoon with heavy rain. Thunder also in *Inverness* (XVIII).

12th. Thunder at isolated stations.

13th. Steady heavy rain, without thunder or lightning, over most of the S.E. of England.

14th. Another rough day, but with much thunder and lightning, and generally less rain than the 13th.

15th. Thunderstorms general in the South-Eastern and Eastern counties, with several serious accidents.

18th. Sharp thunderstorm in Eastern counties in evening.

19th. Thunder in Invernesshire.

20th to 22nd. Increasing and excessive heat, that on the latter day especially in West Yorkshire, North Lancashire, and parts of Wales, unparalleled both as to actual temperature, which at many stations, (where verified thermometers were properly placed), exceeded 90°; and also remarkable for the great number of deaths by sunstroke.

20th. Thunderstorm at *Inverness* at night.

21st. Distant thunder at *Buckish*, and thunderstorm at *Broughton-in-Furness.*

22nd. Slight thunderstorm in central England; but in the north and west, especially between *Preston* and *Lancaster*, a series of the most terrific storms experienced for many years. They extended also through the west and north of Scotland, whence the uniform report is that the brilliancy of the lightning was greater than ever before known.

23rd. The thunderstorm of the 22nd did not pass away until the morning of the 23rd, at which time it was raging violently in *Durham*, *Inverness*, and *Dublin.*

26th. Thunderstorm in north of Scotland.

27th. *Whitby* (IX.) Thunderstorm from S.W. from 2 to 4 p.m. "Many strong flashes struck the ground, one discharge directly overhead came down with a mighty tearing crash, and immediately something like lightning whisked about on the floor of my study for a moment and then vanished." Thunderstorm with heavy rain at *Nairn* (XVII.)

28th. *Fettercairn.* Very heavy rain between 10.30 and 11.30 a.m.

AUGUST.

5th to 8th. Harvest general in Eastern counties of England.

12th. High winds and much rain, especially in the west of Scotland.

15th. Hoar frost at *Melrose* (XII.)

16th. Thunder general in *Ayrshire* and *Lanark.*

18th. Heavy rain in north Lincolnshire in evening and night.

19th. *Forest Hill* (II.) Lightning in N. and N.E. between 9 and 10 p.m. *Sandy* (III.) Thunderstorm. *Diss* (IV.) Thunderstorm.

Coston (VII.) Very severe thunderstorm with heavy rain between 2 and 3 p.m., the hail cut leaves off trees. *Macclesfield* (VIII.) Heavy thunderstorm, man killed by lightning.

22nd to 24th. Continued heavy rain in S.E. of Ireland.

24th. Very heavy thunderstorms prevailed over the S.W. and S.E. of England, accompanied by heavy rain. In Devonshire and Cornwall they appear to have prevailed from about 9 a.m. to 3 p.m.; in the neighbourhood of London there were two, one about 6 p.m., and one from 9 p.m. to midnight. In Leicestershire they did not commence till 8 p.m.

25th. Heavy thunderstorms with hail again prevalent, especially in *Nottingham*, *Ayr*, and the east of Ireland. At *Mansfield* rain so sudden and heavy as to burst the drains.

26th. Thunderstorms in Middlesex, Bedford, Norfolk, Devon, Westmoreland, and general in Argyle, Ross and Inverness.

27th to 29th. Thunderstorms at isolated stations.

SEPTEMBER.

1st. *Sandy* (III.) Lightning but no thunder. *Dava* (XVIII.) Heavy rain.

2nd. Thunderstorm at *Woodlands* (X.)

3rd. Heavy thunderstorm in Leicestershire and at *Broughton* (VIII.)

11th. Thunderstorm in the Lake district.

14th. Thunderstorm in S.E. of England with heavy rain. At *Arnhall* (XVII.) 3·00 is reported to have fallen.

15th. Heavy rain with thunderstorm at *Winchmore Hill* (I.) *Whitby* (IX.) Very stormy from N.E.

18th. Thunderstorm at *Woodlands* (X.)

22nd to 29th. Sharp frost in many parts, and great range of temperature.

30th. Great rain in north of England and south-west of Scotland, continuing in the latter district more or less during the two following days.

OCTOBER.

2nd. Heavy rain in Northumberland.

3rd. Warm in Midland counties, with thunderstorm at *Coston* (VII. at 6 p.m.

7th. *Stanley* (IX.) Swallows left to-day. *Woodlands* (X.) Lightning at night.

12th. Heavy rain without thunder in the neighbourhood of London.

13th. *Woodlands* (X.) Lightning at night. Snow at *Strathconan* (XVIII.)

18th. Lightning at *Melrose* at 8.40 p.m.

21st. *Cheadle.* Heavy fall of snow in afternoon. *Ballyshannon* (XXIII.) Gale from west continuing till 22nd with hail and thunder.

22nd. S.W. gale in the West of England with heavy rain; lightning in evening. Snow prevalent in Scotland.

23rd to 25th. Thunderstorm daily in the West of England, frost and snow in North of England, in Scotland and Ireland.

26th to 31st. Very sharp frost. At *South Petherton* (V.) temp. on a Glaisher stand fell to 20° on 28th.

NOVEMBER.

1st. Severe thunderstorm in North Lancashire.

2nd. Thunderstorm at *Beverley Road, Hull* (IX.) at 4.45 p.m.

3rd. *Melbury* (V.) About 5 a.m. two peals of thunder followed by a fearful storm of hail as large as pistol bullets, some glass broken and trees and plants much injured. *Coston* (VII.) Severe thunderstorm about 3 p.m.

6th. *Holehouse* (XIV.) Stormy. *Fettercairn* (XVII.) The rain during the morning amounted to 2·10. *Keith.* Continuous rain from 5 p.m. on 5th to 10 p.m. on 7th, the fall registered being 0·25 in. on 5th, 2·38 in. on 6th, and 0·71 in. on 7th.

7th. *Melrose.* High wind from N.E.

8th to 13th. Generally fine and dry.

21st. Frost and fog prevalent, with rapid increase of wind at night.

22nd. Very stormy, wind reported as W. or N.W. at all stations south of Nottingham.

24th. *Stanley* (IX.) Two varieties of butterfly out, and the roads as dry as in summer.

25th. *Winchmore Hill* (I.) Dense fog in morning, lightning at night.

26th. Lightning in S.E. between 9 and 10 p.m., and again between 6 and 6.30 a.m. on 27th. Sudden gusts of wind at 10.30 p.m. on the 26th, and 4 a.m. on 27th, lasting in each case about ten minutes.

27th to 30th. High winds with lightning and thunder at isolated stations.

DECEMBER.

1st. *Melrose* (XII.) High wind.

7th. Fog at *Winchmore Hill* (I.)

9th to 14th. Dense fogs in London and in most low-lying valleys in England, clearer in Wales and Ireland with sharp frost.

15th. High wind at *Sprowston* (IV.) and *Hexworthy* (V.) Gale at *Saul Lodge* (VI.) High wind at *Broughton* (VIII.) Terrific gale at *Dalnaspidal* (XVI.) Storm at *Tomintoul* (XVII.) Hurricane at *Strathconan* (XVIII.) Very stormy at *Dava*, and terrific wind at *Strome Ferry*.

16th. *Wetherden* (IV.) Strong gale. *Diss.* Blowing hard from S.W. *Sprowston.* High wind. *Druid* (V.) Squally. *Hexworthy* (V.) High wind from N.W., but not amounting to a gale. *Welbeck.* Terrific gale of wind from W. and S.W. in morning, amounting to a hurricane at 8 a.m. prevailing in North Nottingham, but its fury was felt still more in the valleys of North Derbyshire, taking *Sheffield* for its centre. In that town a great loss of life and property occurred through the falling of tall chimneys and other buildings. *Chapeltown, Leeds.* Between 5 and 9 a.m., there was a perfect hurricane, stacks of chimneys were blown down in all directions in Yorkshire and South Durham, in *Chapeltown* several first-class houses were much shattered, in one instance the roof was carried off bodily. At *Halifax* one man was killed and others were injured by the fall of a tall chimney, and many hair-breadth escapes are recorded. This was the most destructive gale we have known in the north since the "windy morning," Jan. 7, 1839. *Stanley.* Fearful gale from W., doing much damage on all sides. *Deadwater* (X.) The great storm did no harm at this great elevation (2000 feet) on the Scottish border. *Melrose* (XII.) Gale of unusual severity. *Dalnaspidal* (XVI.) Terrific gale. *Keith* (XVII.) Hurricane from 2 a.m. to noon. *Tomintoul.* Stormy. *Forres.* Fearful wind.

20th. *Melrose.* Lightning in evening.

27th to 29th. Sharp frost at several stations.

OBSERVERS' NOTES ON THE MONTHS.

JANUARY.

I. *Northwick House, Harrow.* Early part of the month wet and mild. Rooks began building and starlings pairing; prevailing wind S.W., the latter part of month cold and raw, with S.E. wind. Much lightning.

II. *Hailsham.* Continued rain, warm till the last few days. High winds at intervals. *Alton.* Three days on which the fall exceeded 1·00 in.

III. *Great Missenden, Bucks.* The weather here for the last week was intensely cold, with keen E. winds. Rooks, wood pigeons, and larks congregating in great numbers, and daily becoming more tame, foreboding, I consider, a fall of snow. *Addington.* The early part of the month generally mild; the latter part very cold, the maximum temp. of the last four days being respectively 35°, 30°, 32°, and 32°. Prevailing winds S.W.

IV. *Diss.* The month was remarkable for the extremely high temp. up to the last two days, when the wind changed to N.W. and E., and there were some sharp frosts. *West Tofts.* Unusually mild month; no frost, and only one slight fall of snow. *Sprowston.* This has been an unusually warm month, the first half especially reminding one of May, the thermometer being above 50° on each day from 6th to 16th. The prevailing winds for the first three weeks were S. and S.W., the last week E. and S.E. Slight frosts from the 23rd to the 28th.

V. *Holne Vicarage.* Very wet month. Total fall 15·69, maximum 2·15 in. on 18th and on five other days it exceeded 1 in. *Kilworthy.* Wind S.S.W. and S. at times very strong.

VI. *Oscott.* Temperature mild, sky much overcast. The wind southerly or westerly for more than three weeks at the beginning of

the month, but on the 24th and last three days it was of a northerly or easterly character.

VII. *Coston, near Melton.* Prevailing winds S.E.; and S.S.E. the first half of the month extraordinarily high. *Branston Hall.* On the whole (though it commenced gloriously) neither a pleasant nor wintry month. *Bucknall.* The month was exceedingly mild up to the 20th, with wind always either S. or S.W. First frost of the month on 20th, and frost every night after till the 31st. Mean temperature of the first 16 days 45°·5, but the latter part so much colder that the mean of the *month* was only 40°·5, still being 3°·6 above the average. It may therefore be termed a dry and mild month. *Mansfield.* The variations in atmospheric pressure during the month were great; that on the 18th is most worthy of record: on that day the barometer fell from 29·8 in. to 28·85 in., by the 24th it was up again and rose gradually till the 31st when it was 30·3 in., the range being 1·45 in. Frost set in on the 28th continuing to the end of the month.

IX. *Buckden.* Up to the 19th, temperature rather high for the season, with copious rainfall. Thunderstorm on 19th, followed by hail, snow, and sleet, and a sudden fall of temperature, which continued low to the end of the month. The weather being cold and stormy, with occasional snow showers and hard frosts during the remainder of the month. During the same period, the barometer fluctuated considerably, but within a limited range; on 19th it fell very low, reading only 28·50, and kept low for some days, when it gradually rose and attained its maximum on 31st; the range was very great, maximum on 31st 30·03; minimum on 20th 28·23 (uncorrected). Frequent electrical disturbances and displays of aurora. Prevailing winds S.W. to 20th, afterwards N., S.E. and N.E. to the end of the month. Heavy rain and floods up to 20th. Afterwards snow and frost.

X. *Gowbarrow.* Hills covered with snow at end of month; hard frost and very cold. *Woodlands, Elterwater.* Wind 16 days S. Westerly, 8 days E. and S.E., the remainder N.E. and N.W. Thunder twice in the month, which on the whole may be called a tempestuous one. *Easedale Tarn.* Three weeks very wet, last week hard frost with snow. *Mardale Green.* Hard frost from 27th, with cold E. wind. *Measandbecks.* Rain more or less, day or night, during the first three weeks, last week hard frost with E. wind.

XI. *Castle Malgwyn.* Very mild but stormy. *Presteign.* A cold month.

XII. *Dumfries.* Wet, with frequent storms.

XIII. *Dundee.* Mean temperature of the month 39°. Range of barometer 2·02, being from 28·38 on 19th to 30·40 on 31st.

XVIII. *Strome Ferry.* Four days on which 1 in. or more was measured. Total of the month 12·27. *Strathconan.* The first half of the month generally wet, the third week or so stormy; towards the end there were some fine days, cold and frosty. *Gairloch.* Almost constant frost from the 25th to the end.

XXI. *Tuyford, Athlone.* Barometer (uncorrected) did not during the month exceed 30·02 till the 29th, when it stood at 30·10, rising to 30·18 on 31st; on the 20th it was as low as 28·42.

XXII. *Ballinasloe.* Weather generally wet with a heavy fall of snow on 19th.

FEBRUARY.

I. *Hanworth Middlesex.* Particularly dry month, except the two days 24th and 25th; barometer very high for a few days prior to the 18th. *Northwick House, Harrow.* Frost on the ground every night but two. *Pinner Hill.* A very cold month, with a deep fall of snow, which remained in drifts under the hedges for some weeks. Height of barometer very extraordinary. *Winchmore Hill.* Snow fell on 16 days.

II. *Bromley Common.* Variable month, and rapid changes of temperature. Snow 6 inches deep, on morning of 25th, not a vestige of it to be seen on the following morning. *Hailsham.* A few fine open days with slight frosts before the 23rd, on which and following days, snow fell. Damp and cold thence to end.

III. *Addington.* From the 1st to the 5th, and on the 18th, 19th, 21st, and 24th, the thermometer did not reach 32°. Mean temperature of month only 31°·5.

IV. *Sprowston.* With the exception of a short period from the 14th to the 21st, this has been a wet and disagreeable month, though on several days the rain has not been much more than a drizzle. Snow fell on 7 days at different periods, but never lasted long. The wind has been very variable. Barometer (unlike last month, when it was unusually low) rose on the 18th of this month, to 30·78.

V. *Dartmoor.* The greater part of the whole amount (6·99) fell as snow, the drifts being in many places twelve feet deep. *Trevarrick.* A cold month, rain falling in cold showers, and frequent hail and sleet.

VI. *Oscott.* The month has been cold and dry, the wind has been of a northerly character for the greater part of the month, it having blown from the S. only on 7 days, and this during the latter part of the month.

VII. *Coston Rectory.* Prevailing winds northerly; mean temperature much below that of January. From the 18th to 26th the barometer fell steadily (with the exception of a slight recovery on 22nd), the total fall during that period being 1·97. *Branston Hall, Lincoln.* On the 3rd, 5 or 6 inches of snow fell, and afterwards it was wet and miserable to the 13th, when a mild week followed, and subsequently frost and snow, which closed the month. A very wintry month; the sun was not seen till the 10th. *Bucknall.* Wind N. or N.E. the first 15 days, and the temperature ranged during that time between 28° on the 2nd and 45° on 16th. The month was uniformly cool throughout; the coldest day was the 25th, and the warmest day the 26th. *Mansfield.* The barometer has shown great variation; a gradual rise to the 18th, when it was (reduced) 30·81, rapidly falling again to the 26th, when it was only 29·04.

IX. *Moorside, Halifax.* Very cloudy and dull throughout, with a prevalence of N. and E. wind.

X. *Woodlands, Elterwater.* Very wintry month, and the wind only veered from a northerly or easterly direction once or twice throughout. Barometer remarkably high; on 12 days it was above 30 in., reaching 30·45 on the 19th; the lowest reading was 28·48 on 26th. *Easedale.* Fine winter weather, with very little rain. *Measandbecks.* First three weeks dry and frosty; last week frost, with snow nearly every day or night.

XI. *Llanfrechfa.* Remarkably calm during part of the month, motion of wind very slight from 14th to 22nd; barometer unusually and extraordinarily high during that period, and falling very rapidly from the 22nd to 26th. *Castle Malgwyn.* Though less rain than usual for many months, the atmosphere continued very damp, and on stiff soils the general work is very backward both on farms and gardens. *Presteign.* Very cold, dry month.

XII. *Dumfries.* Very little rain fell in this month. *Melrose.* Snow or sleet during the first six days, and again from 22nd to 27th; frequent halos.

XVI. *Leny.* The finest February I ever remember here.

XVII. *Tomintoul.* Snow on every day in the first week, and on six days between 21st and end of the month.

XVIII. *Strathconan.* Frequent snow at the beginning and end of the month, which has been very cold throughout, whereby agricultural work has been much retarded; general work in woods, &c., has been continued to advantage.

XX. *Glenville.* A remarkably dry month, notwithstanding the falls of ·74 on the 1st and 1·08 on 28th.

XXII. *Ballinasloe.* Weather generally very fine and dry, but very cold till the end of the month; floods fell very rapidly, the river Luck regaining its proper level about the 12th, being the first time since August, 1872.

MARCH.

I. *Muswell Hill.* This has been the driest month since September of last year; the latter part of the month, 17th to 31st, gave only ·37 of rain, while from the 1st to 16th 1·43 in. fell.

II. *Addiscombe.* During this month nearly every form of moisture from the atmosphere (snow, rain, sleet, hail, fog, and dew), passed into the rain gauge. *Bromley Common.* A comparatively calm month; the mornings very foggy during the last week; constant (but very slight) rains at the beginning. Maximum fall of the month only ·20, falling on the 1st. *Hailsham.* Cold and damp in the middle of the month; spring weather towards the end.

III. *Oxford.* Somewhat cloudy during the first three weeks, thence fine to the end. *Sandy.* Rain, snow, and sleet till 24th, then foggy mornings and fine days to the end.

IV. *Diss.* Splendid bright and warm weather from 21st to the 30th; wind generally E. *West Tofts.* Very cold to the 23rd; warm genial weather the remainder of the month. *Sprowston.* Till the last week cold and raw. Vegetation backward, but a few warm days will make all the difference. The prevailing winds have been easterly or northerly.

V. *Beaminster.* A prevalence of cold N.E. winds. *Druid Ashburton.* Dartmoor white with snow from 10th to 23rd, and frequent snow and hail here during that time. *Taunton.* The excess of rain has continued through this month.

VI. *Ludlow.* More snow fell in this month than in all the rest of the year. *St. Mary's Oscott.* Wet and cold; temperature below 33° on 16 days, and nearly as cold when the wind came from the S. as from any other quarter; frequent snow, and more or less fog on 23 days.

VII. *Branston Hall, Lincoln.* Except the 10th, 11th, and 21st, this month was fine and seasonable throughout, with moderate rain. *Mansfield.* The temperature of the month rather low, and the days (with the exception of some few towards the end) dull and disagreeable. Hawthorn trees showing signs of leaf, and in some instances fairly out; gooseberry trees nicely out, violets abundant.

IX. *Stanley.* Beginning and end of the month fine, middle showery and cold. *Moorside, Halifax.* Fog and snow very prevalent during the month; wind very moderate for March. *Lockwood Beck, Guisboro'.* Frequent snow in the middle of the month, and hazy during the last week.

X. *Elterwater.* Mean height of barometer, 29·528; from the 24th to the 30th the temperature increased considerably, the mean for each of those days being 63°·0, but the average day temperature of the month was only 48°·2, and mean night temperature 34°·2. *Easedale.* Remarkably fine weather. *Haweswater.* Dry and cold about the middle of the month, with some snow; latter part fine and dry.

XI. *Llanfrechfa.* Snow and cold winds from the 9th to 21st. *Castle Malgwyn.* In the first half of the month there was much wet disagreeable weather, but no continued rain as in the winter months; the last week rather fine. Snow and sleet frequent between 9th and 16th. *Presteign.* 15th and 16th very cold, with the heaviest fall of snow I have known here; warm and pleasant, on 24th, 26th and 27th.

XII. *Dumfries.* Very ungenial. *Melrose.* Snow on 1st, from 10th to 17th, and again on 22nd and 23rd.

XIV. *Holehouse.* Snow on the 1st, and disagreeable weather till the 16th; a few fine days just before the close of the month.

XVI. *Dalnaspidal.* Frost, snow, or sleet every day till the 25th.

XVII. *Keith.* Sleet, snow, and rain from 9th to 14th. *Forres.* Fine at the beginning and end of month, but cold with snow and sleet from the 8th to the 20th. *Nairn.* Snow and sleet 9th to 13th. Hazy with slight fog during the last week.

XVIII. *Strathconan.* The month has been very favourable for field work and out-of-door labour of all kinds. As there have not been many frosts the work of gardeners is also advanced. Vegetation progressing very well, but more stormy weather still threatens. Some snow still remains on the hill tops. *Dalwhinnie.* Very fine weather at the latter end of the month. Fair and soft at intervals before the 14th.

XX. *Bruce Villa, Clonmel.* A cold month.

XXIII. *Ramelton.* Easterly winds prevailed during the latter half of the month, and enabled the farmers to get the ground ready for the seed.

APRIL.

I. *Northwick House, Harrow.* Frost or nearly so on twenty nights, that on the 24th very severe (24° on grass). Summer birds late and scarce. Oak out before the ash. *Muswell Hill.* Very dry month (0·62); least rain of any month since the commencement of 1872, the nearest to it being February in that year, when only 1·04 was recorded. *Pinner Hill.* A very dry, cold month, everything backward. *Winchmore Hill.* Frost on six nights, and on ground on seventeen nights.

II. *Hailsham.* Very cold N. winds.

III. *Upper Heyford.* This has been the most rainless month, and the space between March 23rd and May 3rd the most rainless period that I have ever recorded—during 41 days only ·24 of an inch of rain fell.

IV. *Diss.* The weather during the first half of the month was cold and raw; the middle bright and warm; from 22nd to 26th sharp frosts and frequent hail and snow, which much damaged the blossoms of wall-fruit and cut off the early potatoes; after the 26th fine spring weather. Rain begins to be much wanted by the farmers, the heavy soils being hard and unworkable, thus wheats, which have hitherto been looking well, are becoming yellowish in many places. *West Tofts.* Very cold nearly all the month. *Sprowston.* A very cold ungenial month. Wind generally E. or N. or between these points and N.W. Vegetation backward, and growing crops yellow from the frosts of the 23rd and 25th. Rain rather below the average.

V. *Beaminster.* Great prevalence of cold N.E. winds. *Kilworthy Hill, Tavistock.* Wind varying from N. to E.

VI. *Sansaw Hall.* A month of great variation of temperature. *St. Mary's Oscott.* The month has been very dry; temperature warm from 15th to 22nd inclusive, but cold with frequent snow showers from 23rd to 26th; only four days on which the wind had not a northerly direction.

VII. *Coston.* Prevailing winds N. and N.E. except on eight days, when it was westerly, and rain fell. *Branston Hall.* A very fine month generally from 6th, on which there was a thunderstorm with great fall of hail followed by fine weather; summer heat obtained

on 15th, afterwards variable with frosts in the week ending on 26th, which injured the blossoms. *Bucknall.* The month maintained its average temperature till the 23rd, when a cold period set in with sharp snowstorms on four days. The following are the readings of the thermometers at 4 ft. from ground :—

23rd, min. 30°, max. 47°	26th, min. 29°, max. 48°
24th, min. 30°, max. 48°	27th, min. 36°, max. 47°
25th, min. 35°, max. 46°	

with sharp blasts of snow. *Mansfield.* The month has been dry and the barometer steady, the highest reading being 30·5 in., the temperature from the 11th gradually increased till the 15th, when there was a heavy thunderstorm ; on that day the heat was excessive, there was no wind and a bright sun ; lightning was seen during the afternoon, and at six p.m. the storm came on. The general temperature has scarcely risen during the month.

IX. *Moorside, Halifax.* Very fine weather from 10th to 21st, but nights very cold ; minimum on grass down to 20°·4 once during the month ; easterly winds prevailed three weeks out of four; between 23rd and 26th winter seemed to have returned, as snow lay on the hills all one day.

X. *Matterdale.* No rainfall except a few drops on the last day; cold N. winds and frosty nights ; grass very backward. *Skiddaw.* Rain so slight that I cannot make a return. *Woodlands, Elterwater.* No thunderstorm in this neighbourhood during this month, although storms of that kind were frequent in other districts ; the most pleasant part was from the 14th to the 21st, when the temperature in shade ranged from 65° to 70°, the weather was very calm and the sky almost cloudless, a rather unusual state in this district in April ; nights cold towards the end, temperature falling to 18° on grass on the 18th. *Easedale.* Very fine dry weather. *Measandbecks.* Dry and cold ; frequent frosty nights ; occasional snow showers, &c., great part of the month.

XI. *Llanfrechfa.* From 22nd to 27th, both inclusive, very keen wind ; last three days fine and warm. *Castle Malgwyn.* Dry, cold, month-of-March weather, thermometer frequently 6° or 8° below the freezing point at night. *Presteign.* Cold but fine to 13th, then warm ; N.E. winds again at the end of the month. *Heyope.* Dry and cold throughout, with a few very heavy showers, nights frosty.

XII. *Dumfries.* Frequent frosts at night, and strong drought by

day; the driest and most ungenial April for many years; pastures greatly injured from lack of rain.

XVI. *Aberfeldy.* Cold easterly winds the last half of the month. *Craigton.* Absence of April showers very conspicuous.

XVII. *Tomintoul.* Very cold and stormy, with peculiarly cold north winds blasting vegetation. Snow fell on seven days.

XVIII. *Strathconan.* Wet at beginning and ending, but good weather about the middle for laying down latter part of oats and potatoes. *Tain.* Wind for the most part northerly, varying from N.E. to N.W.

MAY.

I. *Northwick House, Harrow.* A very ungenial month for vegetation, there being frost on the ground on nearly half the nights in the month, that on the 20th was rather severe. It is a curious fact, but I have noticed that generally the end of the second week in May is cold, with frosts, the cold weather commencing about the 14th.

II. *Bromley Common.* A dry month on the whole; everything very backward, and much damage done to the fruit by the frosts of the 19th and 20th. *Pevensey.* April and May of this year the two most unkindly spring months I remember.

IV. *Diss, Norfolk.* The month has been cool, and many of the nights have been frosty, but on the whole the weather has been fair; the wheats, which were looking yellow at the end of last month, have recovered themselves, and, speaking generally, I should say that both field and garden crops look well; there will, however, be but little wall fruit. *West Tofts.* The weather has been very cold nearly all the month. *Sprowston.* Another cold month, with occasional frosts.

VII. *Coston Rectory, Melton Mowbray.* The nights unusually cold during the latter part of the month. *Branston Hall.* With the exception of 3rd, 4th, and 5th, and a few cold days in the middle, the month was fine and genial, showers falling just when wanted. *Mansfield.* The temperature has been by no means high, the days in general being very dull, foggy in the mornings, and unpleasant; the dampness has brought on vegetation, and the trees (the ash excepted) are in leaf; oaks far before the ash this year.

IX. *Stanley Vicarage, Wakefield.* The cold from the 14th to the 19th has been so severe that some swallows were picked up dead, and two old people died here suddenly from exposure. *Halifax.* Not more than 12 days in the month could really be called fine; several nights

were very cold. Northerly winds have again been prevalent, keeping vegetation somewhat backward.

X. *Easedale.* Remarkably fine weather. *Measandbecks.* Generally dry and often cold, frequent frosts at night; vegetation slow and backward.

XI. *Llanfrechfa.* Great prevalence of cold winds; vegetation backward. *Castle Malgwyn.* Excepting a few days when the wind was from the N. and N.E., this has been a month of fine weather, and crops of all sorts are promising. *Presteign.* Fine growing month, perhaps rather cold.

XII. *Dumfries.* The first half dry and cold; snow on the 19th, and hill sides not cleared till close of the month.

XIV. *Holehouse.* Fine and warm during the last week.

XVII. *Keith.* 2·48 inches of rain fell during the first six days; this followed by cold N. winds, and latterly by frost at night, and scorching sun during the day, has checked and blighted vegetation to a great extent. *Tomintoul.* This month was a cold inclement one; snow fell here, more or less, as if it had been winter, and the winds were piercingly cold, being generally from the N. or E.; in fact, there was not one genial day during the whole month. *Nairn.* Cold easterly winds with many frosty nights.

XVIII. *Strathconan.* Weather unfavourable for crops, frosts injurious, snow frequent. *Tain.* General prevalence of north-easterly gales. *Budgate, Cawdor.* Frequent snow during the first week.

XXI. *Twyford.* Month generally cold and harsh till the last few days.

JUNE.

I. *Northwick House.* The nights having been generally cool have reduced the mean temperature to 1°·5 below the average. *Muswell Hill.* General character of the month dry, rain having fallen only on 12 days, but the total amount was not very deficient.

II. *Bromley Common.* Everything very backward for want of sun. Strawberries a fortnight later than last year. *Forest Hill.* First part of month cold, cloudy and misty, with much E. and N.E. wind; warmer after the 20th, with W. winds.

IV. *Diss.* A beautiful month; the rain, although scanty until the 29th, was so evenly distributed that there were no ill effects from drought. Hay crop generally good and much of it already secured. Fields and gardens look well, the foliage being unusually fresh and

bright, and free from the effects of blight and caterpillar. On the other hand, the slug and snail tribe have been remarkably active and numerous; slugs have attacked my potatoes in the ground, riddling and inhabiting them, as I found on exhuming some of them to ascertain the cause of the new appearance of the plants. This I have never observed before, at least to any extent. Strawberries, cherries, gooseberries and currants are in plenty, but apples will be very scarce, and pears not abundant. The beginning of the month was cool, but the rest very warm with much sun, nights often cloudy. *West Tofts.* Thunder, unaccompanied by rain, in the early part of the month; no thunderstorms.

VI. *Oscott.* Winds variable, temperature high, maximum above 70° on 7 days.

VII. *Branston Hall.* A purely summer month; rain greatly needed towards the end, so that which fell on the 29th caused a marvellous growth. *Calcethorp.* A very fine growing month; everything was very backward at the beginning, but now it is about an average season. The crops all look well. *Mansfield.* The month has been unaccountably dry, though from the absence of sun, not so hot as it might have been.

X. *Easedale.* Fine weather; fruitful showers. *Measandbecks.* Very droughty with the exception of an occasional thunder-shower.

XI. *Castle Malgwyn.* Not warm, nevertheless crops of all kinds are growing fast, and will be abundant. Fruit not so plentiful as we at one time expected. *Presteign.* Fine but chilly. *Dylife.* Very fine.

XII. *Dumfries.* Dry and fine, and crops looking remarkably well.

XV. *Glengorm.* A good deal of warm misty rain this month, and very little high wind, except on 19th, 20th, and 27th.

XVII. *Keith.* Genial weather and crops progressing favourably. *Tomintoul.* A very dry month; very sultry with thunder-showers; in fact, all the rain that fell during the month was from thunder clouds.

XVIII. *Strathconan.* Crops in good condition and favourable weather.

JULY.

I. *Harrow.* Altogether a fine month. *Muswell Hill.* Dry month; the heavy fall on the 13th being insufficient to bring up the total to the average. *Winchmore Hill.* Very dry from 14th to end, only ·14 being registered during that time.

II. *Bromley.* A fine month on the whole. *Forest Hill.* Prevailing

winds S.W. and S., very hot from 20th to 28th. No hail fell in this month, and there was but little electrical disturbance, though the upper strata of clouds frequently assumed an electrical appearance. Temperature in shade rose above 80° on seven days.

IV. *Diss.* A month of splendid weather; the hay harvest ended favourably, a good crop well secured; there is little appearance of potato disease, and the gardens look well; the month terminated with fine hot weather; the rainfall of July, like that of June, was so evenly distributed that there have been no bad effects from the drought. *Sprowston.* On the whole a fine month; very warm 20th to 23rd, thermometer registering 92° in shade on the latter date. Very heavy rain, accompanied with wind, on the 13th did much damage to the heavy wheat, some fields in the parish quite flat; the great heat of the last fortnight in the month has brought the corn on very fast, so that the harvest will commence a week earlier than was expected.

V. *Mells.* First three weeks very stormy.

VII. *Branston Hall.* The hottest month in the year, the 22nd and 23rd being amongst the hottest days on record; rain much needed towards the end of the month. Considering the great heat, the air was too dry to be pleasant, and both animal and vegetable life languished. *Mansfield.* The month has been generally fine, abundance of fruit and well ripened owing to the bright sun.

X. *Woodlands, Elterwater.* This month was in no way remarkable except for the great fall of rain (11·62), nor was it noticeable for heat until the 22nd, which was the hottest day (86°) this year.

XI. *Castle Malgwyn.*—On the 20th, 21st, and 22nd, the heat was intense, a heavy thunderstorm with rain followed, which has greatly benefited the growing crops, except potatoes, among which since then the disease is spreading fast. Harvest has begun on some of the early spots of land. *Presteign.* Hay only now cut; very unsettled to the 19th, then four days very hot. *Heyope.* This month is remarkable for the great absence of sun heat, and sun light.

XII. *Dumfries.* Excessively wet, not two fine days together.

XV. *Glengorm.* A dull wet month, not so much remarkable for heavy rain as for its constancy, and for the absence of sunshine; prevailing winds S. or S.W. No thunder heard during the whole month.

XVII. *Mulben.* The month has upon the whole been most favourable for the agriculturist, but a little too moist for this district; however, the crops look remarkably well, and an average return is expected in every department. *Nairn.* Latterly, notwithstanding the heavy rain, very warm with much thunder.

XVIII. *Strathconan.* First week good weather for peat; some hay cut and some peat stacked by the 8th; middle of month good turnip weather. Hay lying soaked in the heavy rain of the 22nd. *Tain.* The weather was very warm for a few days preceding the 22nd, and almost every day after to the end of the month there was more or less thunder.

AUGUST.

I. *Muswell Hill.* The amount of rainfall this month is greater than that of any month this year except January, which exceeded it by ·03 only.

II. *Bromley.* Stormy month, rain at times very heavy. *Forest Hill.* First half of the month fine and warm; latter half unsettled and wet. Prevailing winds W. and S.W., when interrupted by easterly winds, rain resulted; the nights were uniformly warm.

IV. *Diss.* The month, and I may now say the summer, has been exceedingly fine, and the harvest weather perfect; nothing has been spoiled either by drought or excessive wet. The thunderstorm of the 19th was very severe five miles S.W. of Diss. At Redgrave fifteen sheep were killed, and at Yaxley a cottage was struck and injured. In spite of the fine weather there has been much illness in the neighbourhood, diarrhœa and scarlet fever having been prevalent. The severity of both diseases, however, may be attributed to local causes rather than to atmospheric influences. As to the result of the harvest here, wheat will prove a light crop, barley very good, peas and beans very good, root crops very good, gardens have done very well, the potato crop is excellent and has been but little attacked by disease. Apples and pears, however, are few and far between. *West Tofts.* Several thunderstorms have visited the neighbourhood, none very severe. *Sprowston.* Rain more or less on eighteen days; the fall is rather below the average, but the frequent showers have delayed harvest considerably.

V. *Court Barn.* The injury to the corn, which has been cut three weeks or a month, is very considerable; very little wheat has been secured. *Taunton.* Although the rain was slightly in excess in July, we were much in want of water in the middle of this month, and that want having been abundantly supplied by a fall of nearly double the average, we shall now be thankful for dry warm weather.

VII. *Coston.* A very unsettled month; prevailing winds S. and W. except during the great storm of the 19th, and during the stormy period 23rd to 25th. Query?—Is not hail, such as fell on the 19th and 25th, likely to rebound from the gauge, and so diminish (in

a small degree) the recorded fall?* *Branston Hall, Lincoln.* Harvest commenced on 3rd, and continued without interruption till the 18th, on which day 1·37 of rain fell, afterwards it was wet to the end of the month, and the wettest month in the year; much thunder. *Bucknall.* Unfavourable harvest weather after the 18th, about mid-harvest in this locality at the end of the month. *Mansfield.* The early part of the month was very dry, and warm, so dry indeed, that the gardens and fields were nearly dried up.

X. *Casterton.* Very unfavourable weather for harvest operations, much being still out. *Easedale.* Another wet month, but we hope that the weather is improving; we much need it, as the crops are principally out as yet.

XI. *Castle Malgwyn.* Fine up to 17th, but since then very unfavourable weather for harvest work, and the corn is beginning to sprout on the ground, which is quite saturated with rain. *Dylife.* Very rainy. *Presteign.* Wet and cold; harvest very late.

XIV. *Holehouse.* This has been an extremely wet month, the rain having been both frequent and heavy. In the absence of drying winds, when it was not raining, the amount of evaporation was small; great damage has been done to the hay. Harvest just beginning.

XVII. *Mulben.* This month has been very fine for maturing the grain crop, and also what we term green crops, or what is better known as roots. In this neighbourhood the crops will be a fair average, but sunshine and warmth are now much wished for.

XVIII. *Strathconan.* Hay-making commenced on the first, but all gathered by the end; some hay and peat was secured. Corn and potatoes looking well in the middle of the month; turnips partly fingered and toed by the 26th. *Dalwhinnie.* Early part of the month showery to 17th, then fresh and warm to 26th, when there was a thunderstorm.

XXIII. *Ramelton.* Calamitous weather, affecting not only the potatoe crop, and the storing of cereals, but preventing the making of kelp, the most important industry of the Donegal shores.

SEPTEMBER.

I. *Hanworth.* The barometer was generally higher than in any previous month of the year, at one time for a day or two being 30·6. *Muswell Hill.* The peculiarity of this month has been the wet character of the first half, and the dryness of the second. More rain fell

* Yes; but if the deep funnels suggested on page 8, are adopted, this slight source of error will be removed.—Ed.

during the first 15 days than in the whole of any month in this year. On the other hand, only ·01 fell during the last 15 days—a longer period without rain than has occurred this year. *Winchmore Hill.* The first 15 days wet, all the rain (considerably above the average) having fallen in that time.

II. *Bromley.* Weather at the commencement of the month very variable, with low temperature and frequent showers. Barometer high from the 21st. *Hailsham.* Latter part of month fine, dry weather, with hot sun.

III. *Addington.* From the 22nd to the end the weather brilliantly fine.

IV. *Diss.* The first half of the month extremely cold and wet, but the change occurred too late to interfere with the harvest operations in this neighbourhood, which were all concluded under the most favourable circumstances by the end of August. Splendid weather to the end of the month, but scarlatina of an unusually severe type and typhoid fever are very prevalent. Bad drainage and water have much to do with their fatality. Hardly any potatoe disease here, and a splendid crop. *West Tofts.* The weather remarkably fine from 16th to the end.

VII. *Coston.* Winds variable; a longer period of dry weather this month than has occurred (as yet) this year. *Branston Hall, Lincoln.* First half of the month wet, with much thunder, but a low night temperature prevented the long exposed corn from sprouting in the fields, the latter half of the month very fine for the completion of the lingering harvest. Some potatoe disease. *Calcethorpe.* Mean amount of cloud 5·5; mean humidity 77.

IX. *Stanley, Wakefield.* On the whole this has been a favourable month for getting in the harvest, and no grain has been spoilt in this parish. From the 22nd to the end very beautiful weather. *Halifax.* Dull and showery up to the middle of the month; several fine days (sky clear) towards the end of the month.

X. *Woodlands, Elterwater.* 22nd to 29th, very hazy. Mean temperature of the month 51°·7. *Easedale.* Beginning of month very wet, last week very fine. *Measandbecks.* The first three weeks generally dark and showery; last week bright and sunny, frost at night.

XI. *Presteign.* Cold and wretched to the 20th, then fine and pleasant; harvest late. *Dylife.* Very rainy.

XII. *Dumfries.* On the whole favourable weather for harvest.

XV. *Glengorm.* Cold weather till the 9th; temperature not above 54°.

XVII. *Mulben.* Very unfavourable for harvest operations, with the exception of a few very fine days, and there is still a considerable quantity to cut and gather in to the barnyard, which causes anxiety to the farmers. *Tomintoul.* Very wet, cold and disagreeable, except from 22nd to 28th inclusive. Farming operations greatly retarded and much damage done to the crops. The rivers in the south of Banff, and in Aberdeenshire, have been more highly flooded than for many years, causing great damage to the farmers. *Keith.* Mild and very warm 22nd to 28th.

XVIII. *Dava.* Rain and high wind at the end of the month.

XXIII. *Ramelton.* A week of warm sunshine, commencing on the 21st, has come very opportunely, enabling farmers to secure their grain crop in good order, and also permitting the kelp men on the shores to burn the seaweed they had gathered during the summer.

OCTOBER.

I. *Harrow.* Heavy fall of rain on the 12th, severe frosts on the 27th, 28th, 29th, and 30th, the thermometer being 23°, 18°, 19°, and 22° respectively. Martins about till nearly the middle of the month.

II. *Forest Hill.* Total range of temperature in air 49°, the maximum I ever registered. Weather wet and stormy till the 26th with south-westerly winds, then very cold and foggy with N. winds till 31st. *Forest Lodge, Maresfield.* The wettest month in the year (4·77). Thunder and lightning were recorded on 22 days; snow fell on the 10th.

IV. *West Tofts.* Sharp frosts on several days during the latter part of the month. *Sprowston.* Rain about ·60 below the average for Norfolk.

V. *Brampford Speke.* Five successive hoar frosts, not followed by rain.

VI. *Brereton, Leamington.* On the whole very cold, especially during the latter part, when the minimum on the grass fell to 27° on 24th, 25° on 26th, 21° on 28th, 20° on 29th, 24° on 30th. In October, 1872, I recorded but 3 days frost, the lowest being 29° on the 12th. Winds chiefly S., S.W., and W.

VII. *Branston Hall, Lincoln.* The month opened wet, with much thunder and high temperature, which accelerated the spread of the potatoe disease; after the 12th it was fine. On the 25th, dahlias, &c. killed by the frost; much lightning, but neither thunder nor rain on

nights of 22nd to 25th inclusive. *Bucknall, Horncastle.* Mean temperature 4° below the average, and the sharp frosts of the last week unprecedented.

IX. *Stanley, Wakefield.* The severe weather at the end of the month has been very trying to the aged.

X. *Measandbecks.* Weather seasonable. Rain, snow, and frost alternately, and very cold in the last week.

XI. *Castle Malgwyn.* Except a few days at the beginning and end of the month, when it was frosty, the month has been a wet one. *Heyope.* This month is remarkable for its frosts, especially towards the end.

XII. *Dumfries.* Much rain and keen frosts at the end of the month.

XIV. *Cessnock Park.* There has not been so much rain (6·00) in the month of October since 1862, when 7·40 was recorded.

XV. *Glengorm, Isle of Mull.* A month of almost incessant rain and high winds.

XVII. *Mulben.* So wet and unsettled that much harvest crop is still uncut.

XVIII. *Strathconan.* Bad harvest weather, but finished on 17th. *Dalwhinnie.* Cold and frosty towards the end.

NOVEMBER.

I. *Muswell Hill.* Not half the fall of November 1872, but almost identical with that of July 1873, which was 1·97, this month being 1·98.

II. *Addiscombe.* Standard rose half open on 30th, and common primroses have been in blossom all the month. *Bromley.* It has been an unusually mild and comparatively fine month. The temperature of 1865 alone exceeded this during many years. Bar. pressure very variable at the close of the month; at 10 p.m. on the 29th, 29·33, at 10 p.m. on 30th, 30·15, a rise of ·82 in twenty-four hours.

IV. *Diss.* A fine month. A severe form of scarlet fever has been prevalent and fatal in this neighbourhood during the autumn, and its intensity has increased during the past month. Acute rheumatism is also common. *Sprowston.* A fine month; a great contrast to the last November; total rainfall about 1 in. below the average for Norfolk. Very few fogs or frosts. Wheats have been planted in excellent order.

V. *Druid, Ashburton.* First week very low barometer, and daily

rain. *Taunton.* Although the rainfall has been half-an-inch above the average, it has been a splendid month for agricultural purposes, and a better sowing time has hardly ever been known.

VI. *Sansaw.* After the middle, the warmest November I ever remember, on several days and nights nearly summer heat, 50°, the night of the 29th and several others exceeding 42°. *Oscott.* The month has been very cloudy and foggy. Gale on the last five days attaining to a fresh gale on the evening of the 29th.

VII. *Coston.* From 8th to 19th prevailing wind N. and N.E., from 21st westerly; strong gales on 27th, 28th, and 29th. *Branston Hall, Lincoln.* Excepting thunder and hail during the first week this was a remarkably dry and mild month. *Calcethorpe.* A fine mild month, with high winds from 21st to the end.

IX. *Stanley.* From 9th to 17th a most charming week, favourable for farming operations. Thrushes singing daily.

X. *Blencowe School.* Remarkably mild, the night temperature being often as high as in May. *Easedale Tarn.* A fine winter month. *Measandbecks.* Generally seasonable.

XI. *Llanfrechfa.* The first half of the month much colder than the last. *Castle Malgwyn.* This is usually a very wet month in this district, but not so this year, for it has been very fine throughout.

XII. *Dumfries.* Dry and fine, eleven fine days consecutively.

XIV. *Cessnock Park.* From 24th to 27th the barometer falling rapidly. Stormy on the west coast and on the Clyde.

XVII. *Forres.* Cold and wintry towards end.

XXI. *Inisnag.* The weather during the greater part of November and December of the year 1873 has been a complete contrast to that of 1872; dark mild weather and an extraordinarily high and steady barometer the first fortnight of November. All agricultural work well advanced, little or no rain and yet south winds prevailed; but for the heavy night's rain registered on the 30th December (amounting to 0·19), it would be, I suppose, the driest December on record, as it would only have been 0·38.

DECEMBER.

II. *Lynnwood, Sunningdale.* The cold period, 8th to 13th, was accompanied by thick weather hardly amounting to fog; minimum temperature 17° on the nights of 9th and 10th.

III. *Berkhampstead.* This was one of the driest Decembers on record, the amount being only ·70, Dec. 1864 was only ·45, and Dec. 1857 ·81. *Abington Pigotts.* This month was drier than I have ever before recorded in December.

IV. *Beech Hill, Bury St. Edmunds.* This month was the driest month in the year, and save one the driest December since 1859, when my record commences. *Abbeygate Street, Bury St. Edmunds.* The driest December for several years. *Diss.* With the exception of a few foggy days the month has been remarkably fine, and very favourable to the late agricultural operations of the year, and the rainfall remarkably small. Scarlatina has been very prevalent in this district. The first 13 days of this month were fine, and the extraordinary steadiness of high bar. was remarkable, the mercury generally stood about 30·50 (seldom and very slightly below this), and once it reached 30·56 (corrected).

V. *Lamorna, Torquay.* The driest December during the last ten years. *Brampford Speke.* December last was the driest I have ever recorded. *Broadhembury.* A very remarkably dry December: the driest on my register, kept since 1837. Only on three occasions has the rainfall in December been less than 1 inch, viz., 1840 ·91, 1843 ·61, 1857 ·71, and 1873 ·43. *Mells.* The least rainfall ever recorded for December; average of seven years, 1866 to 1872, 4·63, thus showing a deficit in 1873 of 3·57.

VI. *Boyce Court.* Remarkably small rainfall. *Sansaw.* December. The warmest and finest month of December that any one of my acquaintance can recollect; complaints everywhere of want of water; cottagers obliged to get water from pits, or anywhere.

VII. *Freeman's Common, Leicester.* Remarkably dry. *Branston Hall.* The finest, mildest, and driest December ever remembered; hardly any rain, and frost only slight in the middle, and on three days at the end.

VIII. *Winnington Northwich.* Unusually dry, only ·81, and falling on nine days; December 1869 had a total fall of 2·48 on fourteen days. *South Shore, Blackpool.* Very fine, mild, and open weather up to end of the year. Daisies and other flowers in full bloom. *Broughton Hall.* Singularly dry for December.

X. *West Hendon House.* The fall this month (·27 in.) was less than in any month since 1860. From Nov. 9th to Jan. 2nd the fall was only ·62 in.; in some places in the neighbourhood the want of water was severely felt.

XI. *Presteign.* Very mild to the 8th, then hard frost to the 14th; the rest of the month fine and mild.

XII. *Dumfries.* Mild for the time of the year; some gales in the last half of the month. *Melrose.* Unusually mild, the heather on the northern slopes of the Eildon Hills, at an elevation of 2800 ft. above sea level, was gathered on the 25th in full leaf; also a few buttercups, and on the 28th wallflowers, on the top of Melrose Abbey, were in full bloom.

XIV. *Holehouse.* Month unusually mild; very light rainfall; scarcely any frost, and the fields as green as in the month of April.

XVII. *Tomintoul.* Such a fine December is not within the memory of the oldest inhabitant.

XXI. *Clonbrin.* The early part of the month very damp.

OBSERVERS NOTES ON THE YEAR 1873.

ENGLAND.

DIVISION I.

TEDDINGTON.—The annual fall is 9·47 less than that of 1872.

MUSWELL HILL.—The total fall of rain for the year 1873 (24·70) may be considered about the average for this district; in no one month has 3·00 been measured; but September, which heads the list with 2·97 in., very closely approaches it. Though the past year shows more than 13 inches less aggregate fall than 1872, there have been three occasions on which the fall in 24 hours has exceeded the heaviest in 1872, viz., July 13th, 1·24; Sept. 14th, 1·19; and Oct. 12th, 1·24. The heaviest in 1872, Aug. 7th, being only 1·17.

DIVISION II.

GUILDFORD GRAMMAR SCHOOL.—Only one day (July 13th) on which more than 1·00 in. fell, on 2 days it exceed $\frac{3}{4}$ of an inch, on 5 days it exceeded $\frac{1}{2}$ an inch, and on 19 exceeded a $\frac{1}{4}$ of an inch.

ASHFORD, BURFORD HOUSE.—The fall this year is 13·52 in. below that of 1872.

LINTON PARK.—Winter medium, Spring early, up to the end of April, when dull, cold weather followed and continued till the beginning, or nearly the middle of July, after which it became fine with sufficient rain to meet all the requirements of vegetation. A fine autumn followed. December especially fine and dry, so much so that the roads were all but dusty.

PARKSIDE, BECKENHAM.—Rain in 1873 about the average both as

to the fall and number of days: the heaviest daily fall did not reach an inch; falls exceeding ·50 occurred on 12 days; there were two fortnights without rain, Sept. 18th to Oct. 1st, and Nov. 30th to Dec. 13th. It seems worthy of remark that the continuously wet harvest month, 18th Aug. to 15th Sept., began immediately after the barometer reached its highest in August, and ended immediately after it reached its lowest point in September. In December the total rainfall was only 0·38, being the smallest monthly fall since June 1868 (0·34 in.) The following table will show the average for each month for the last eight years at this place, and the departure in 1873 from the average.

Month.	Average 8 years.	Fall in 1873.	Diff from average.
	in.	in.	in.
January..	3·156	3·056	— ·100
February.	1·724	1·917	+ ·193
March.....	1·767	1·468	— ·299
April	1·649	·995	— ·654
May.... ..	1·839	1·533	— ·306
June.....	1·878	2·987	+ 1·109
July.....	2·336	2·006	— ·330
August....	2·199	2·953	+ ·754
September	2·748	2·142	— ·606
October...	2·519	3·171	+ ·652
November	1·733	2·777	+ 1·044
December.	2·427	·384	— 2·043
Total	25·975	25·389	— ·586

Temperature.—January considerably above the average, February about as much below it; in other respects the year was remarkably uniform, there having been no periods of extreme heat or cold, except one very cold day, Dec. 10th, when the maximum was as low as 24°·5, and the mean only 20°·5. *Barometer.*—The monthly mean very uniform, except January, which was low, and December very high, 30·294 in., the highest since November, 1867, (30·295), it fell below 29 in. on five different days, viz., four days consecutively in January, and one in February, the lowest for the year being 28·486 on Jan. 19th, at 11·30 p.m., and the highest, 30·791, on the 18th of Feb., each case happening just two days before the last quarter of the moon. The most peculiar period of the year was Dec. 1st to 14th, when the bar. remained exceptionally high and steady throughout, and in which also occurred the lowest temperature of the year (16°·5), the calmest day and week, five days of very dense fog and no rain throughout.

Wind—A very calm year, the most wind occurring in the first three weeks of January, and in the last week in November. The average daily horizontal movement of the air in miles for each month was as follows:—

January	319	May.....	211	September...	207
February.....	214	June.....	199	October.. ...	190
March	216	July.....	220	November...	225
April	233	August	244	December...	195

Average for the year 223 miles per day; the greatest in any 24 hours was 674 miles to 9 a.m. on Nov. 30th, and the least 19 miles to 9 a.m. on 10th December; it only exceeded 600 miles in 24 hours on two occasions, and only on five other occasions did it exceed 500 miles; altogether the year 1873, unless the high bar. Dec. 1st to 14th be excepted, was singularly free from any unusual meteorological phenomena.

Forest Hill.—The longest dry periods were 14 days from Sept. 18th to Oct. 1st, and Nov. 30th to Dec. 13th inclusive. The rain was pretty evenly distributed among the months, except that December only had 0·39. There were few heavy gales in the year, and not many thunderstorms in spite of a hot summer. Heavy snows in February, and dense fogs prevailed in part of December. Bar. very low in January (28·48, reduced to 32° and sea level, on 20th), and very high in February (30·79 on 8th), and very high and steady the first fortnight in December. The adopted mean temperature of 1873 was 49°, mean dew point 42°·8, and mean humidity 80°. The max. in shade was 89°·8 on July 22nd, and in sun 138° on June 29th. The min. in shade was 20°·0 on Dec. 11th, and on grass 17°·9 on Dec. 10th. The shade temperature rose to or above 80° on 13 days; and fell below 32° on 47 nights, on the grass it went below 32° on 109 nights. The latest frost in the Spring was on May 20th, when the grass min. fell to 27°; the earliest in the Autumn was on Sept. 22nd, when the grass min. fell to 30°·1.

Worthing.—The rainfall this year (23·17) is 4·45 in. below the average (22 years), and 11·77 in. less than the fall in 1872.

Shopwyke.—Many w[illegible] in this locality very short of water at the end of the year, some have lately become dry, although in 1872 we had 40·12 (or [illegible]nd a half's rainfall), and this year, 1873, we have measu[illegible]5, which is *only just below* the average.

Warbledon Rectory.—On several days small amounts, recorded as found in the rain gauge, came from fog or dew.

KETCHES. Summer so far deficient in genial weather that chesnuts were small, and wall fruit was scarce. Few fine afternoons and evenings.

FOREST LODGE, MARESFIELD.—The rain which has fallen at this station during 1873 is not only 15·88 less than fell in 1872, but is also 0·81 below the average (31·08) of the preceding 17 years. A measurable quantity (·01) fell on 189 days, while in 1872 there were no less than 232 wet days. April was in both years remarkably dry.

CHAPEL HILL, BASINGSTOKE.—The year has been noteworthy for a great number of days on which a small quantity of rain has fallen, as out of 180 days on which rain is recorded, there were 111 on which the fall was less than ·10, and very nearly one-third of the total amount fell on 12 days.

DIVISION III.

BROUGHTON, NEAR BANBURY.—The rainfall of 1873 was 11·78 less than that of 1872, and 2·50 below the mean of 5 years, 1868 to 1872.

WARESLEY, HUNTS.—Mean rainfall for 10 years, 22·50 on 137 days; total of 1873 = 20·62, or 1·88 below the mean.

ABINGTON PIGOTTS.—1873 was 1·06 below the average of the last 10 years in the same gauge. The mean hourly velocity of the wind as shown by a "Robinson" anemometer read daily at 9 a.m., was 14·6 miles; the greatest average velocity was on February 3rd, the mean of 24 hours being 46 miles per hour, it never was calm (absolutely) during the time. The mean temperature of the year was 48° being 0°·6 below the average of 10 years.

CARDINGTON.—The number of days on which rain fell in 1873 = 143, the average number during 28 years is 153, 1873 being 10 less than the average.

Month.	Total Rain-fall, 1873.	Average 28 years.	Difference.
	in.	in.	in.
January...	2·060	1·812	+ ·248
February.	1·400	1·178	+ ·222
March	1·340	1·415	— ·075
April	1·060	1·530	— ·470
May	1·830	1·791	+ ·039
June.	2·240	1·977	+ ·263
July.....	1·890	2·164	— ·274
August ..	2·150	2·273	— ·123
September	1·820	1·970	— ·150
October ...	2·060	2·449	— ·389
November	1·900	1·624	+ ·276
December.	·450	1·530	— 1·080
Total	20·200	21·713	— 1·513

DIVISION IV.

WALTHAMSTOW.—No falls above ·50 in 24 hours except in the seven months, May to November inclusive.

AUDLEY END, SAFFRON WALDEN.—The year was very mild at the beginning, but the spring was long, cold, and very dull. The summer was not remarkable for any extremes. Fine for the early harvests, but very wet for the late one. Mild October, and particularly dry and fine December. Mean daily temperature 2°·5 colder than 1872, being 47·9; mean bar. 29·95 (corrected); Max. temp. July 13th, 86·5; min. temp. December 10th and 13th 20·0; min. temp. on grass Feb. 23rd and 25th 16·0; mean daily temp. of the earth in light garden soil 6 in. deep at 9 a.m. 48·6, and 12 in. deep at 9 p.m. 50·4; max. bar. Feb. 18th, 30·80; min. bar. January 19th 28·47.

BISHOP'S HILL, IPSWICH.—A very dry year, not much more than half the fall of last year. A most unusually fine seed time in the autumn.

BEECH HILL, BURY ST. EDMUNDS.—Only two days in 1873 when the fall exceeded 1·00 in 24 hours.

ABBEY GATE ST., BURY ST. EDMUNDS.—The year has been very free from heavy thunderstorms, and perhaps rather remarkable for the great number of small daily depths of rain, yet the amount is a good average for us.

BARNINGHAM.—Unprecedented autumn for farmers, its unusually dry character rendering autumn tillage easy and good, causing healthy growth of wheat and a good plant, singularly different to last year. Ponds as low as during the worst part of 1871.

DISS.—The summary of the year 1873 would be this:—Spring and hay harvest very fine, with excellent crops. Harvest time very fine and favourable, all being well up before the rains of September. Wheat crops rather light: other crops very good. Garden crops good, with the exception of wall fruit. Very little potato disease. Late autumn and winter fine, and highly favourable for getting in wheat, and other operations.

DICKLEBURGH.—This has been an unusually dry autumn and winter; very few of our water courses have any water in them. On January 1st, 1874, ponds are either empty or very low, and there is much scarcity of water where cottages are not supplied with wells.

GELDESTON, BECCLES.—Total fall 1·04 less than any before recorded, and 5·24 less than the average of the past 8 years. August, November, and December had the smallest falls yet registered for those months.

DIVISION V.

ORCHESTON RECTORY, DEVIZES.—In the earlier part of the year the water was higher than it had been since 1852-3, and my well overflowed.

OSMINGTON LODGE, WEYMOUTH.—The average of 7 years has been 34·59, (the fall in 1873 was 3·41 in. below it); the average number of days has been 168·4, greatest fall in 24 hours 1·43 on 16th of Oct. 1872, and the wettest month Dec. 1868 = 8·20.

CHALBURY.—The rainfall in 1873 was 4·50 less than the average of 8 years.

BRAMPFORD SPEKE.—April, May, June, October and December, below the average rainfall of the previous eight years; January, March and August above it.

ZEAL MONACHORUM.—The year 1873 was remarkable for its gales and the damage done to the shipping. Very little wall fruit on account of the frost in the early part of the year. Harvest time (July and August) wet. We must expect this year a late spring and very cold, it being the seventh year, or holiday of the earth, which, according to date, takes place as regularly in Cycles as day and night, and we must expect a middling dry year.

GREAT TORRINGTON.—The average rainfall for ten years, 1863—1872, being 40·83, the fall this year is only ·62 below it, though it is nearly 17 inches below that of 1872. January, February, March, July, and August, were above, the other months below their respective averages. The excess was greatest in January, July, and August, the deficit largest in December, which was the lowest in the whole series for that month.

MESHAW.—Number of days on which rain fell above the average, the amount of rain below it.

PENZANCE.—1873 as compared with 1872 is remarkable for the amount of rain recorded, which is about 14 in. less than last year, and very nearly our average for many years past. The driest months were April, June, and December, and the wettest January, February and August.

ALTARNUM.—The year 1873 gave few extremes of heat and cold, it was chiefly remarkable for its late and protracted winter, its late spring, wet summer, and mild and dry Christmas. The average rainfall of the past ten years at Altarnum is 61·50 in. on 216 days; 1873 gave 60·02 in. on 225 days, thus approaching closely to the average.

DINDER.—Average rainfall 1864—73 inclusive, is 38·17, greatest 50·34 in 1872, least 25·02 in 1864. Fall in 1873, 7·32 in., or 20 per cent. below the above average.

MELLS.—The rainfall of the year (33·76) is 8·07 below the (7 years) average. January, March, July, and November were above, and the other months below the average.

DIVISION VI.

SAUL LODGE, FRAMPTON-ON-SEVERN, GLOUCESTER.—The rainfall in 1873 was 24·06 in., or about half-an-inch below the average, and nearly 15·00 in. below the fall in 1872. With the exception of a heavy gale on the 20th Jan. (when the barometer fell rapidly to 28·44), and the gale of 15th Dec., the year has been singularly calm and fine. There was a great absence of sunshine through September and October, most unfavourable for the ripening of out-door fruit. The barometer ranged unusually high for the first 14 days in December, the highest being 30·75 on the 4th, and the lowest 30·46 on the 6th, the mean for these days was 30·64, and as usual with great atmospheric pressure it was accompanied by dense fogs during the greater part of the time.

ROCKLANDS, ROSS.—The rainfall of 1873 was almost identical with the average of 21 years.

LUDLOW.—The rainfall of 1873 (26·36) is the smallest I have registered (I commenced in 1866), 1870 was however only 26·87 in.

SANSAW HALL.—The rainfall of 1872 was 45·90 on 239 days, in 1873 it has been 23·47 on 173 days, or 22·43 in., and 66 days, less.

ARDEN HOUSE, HENLEY-IN-ARDEN.—The deficient rainfall of the past year, as compared with that of 1872, 21·94 against 32·90, has had a very serious effect on the springs and streams in this part of the country, causing already much inconvenience and alarm to the farmers.

DIVISION VII.

FREEMAN'S COMMON, LEICESTER.—The total fall about 2½ inches below the average; no rain fell between 15th Sept. and 3rd of Oct.

BOSTON.—From an examination of the rainfall during the past 7 years it appears that on an average the rain falls on 177 days in a year. On 77 days the wind was blowing from a S.-westerly direction; on 37 from a N.-westerly; on 32 days from N.-easterly, and on 22 days S.-easterly. The heaviest falls have always come from the S.W.

WELBECK.—The rainfall here in 1873 was considerably below the

average, it was only 22·41, while the average is nearly 25 in. With the exception of December, which was unprecedentedly dry and mild, the rainfall of each month was very evenly distributed, January being the wettest. Although the summer and autumn months were favourable for ripening and reaping the corn crops, the wheat harvest was reported as much below the average, this arose from the excessive rainfall (in October, November and December of the preceding year, 1872) preventing the usual quantity of wheat being sown till the spring of 1873. All the other cereals, as well as the root crops were quite average ones.

TRENT COLLEGE.—In this part of South Derbyshire 1873 was on the whole a cold, dry year, especially in the earlier months after January. February, April, and December gave much less rain than usual, whilst August alone very much exceeded the five years' average. The total rainfall of the year was 20·82 inches, which quantity fell on 171 days; the average of 1869—1873 being 24·74 on 175 days.

DIVISION VIII.

PULFORD, CHESTER.—The farmers all agree that they have had a very favourable seed-time. October, November, and December, having all been dry months, and there are no floods, which is an unusual circumstance here at this season, at which the Dee frequently overflows its banks.

HINDERTON, NESTON.—The rainfall of March and September was above the average; that of every other month was below it. The total was an inch less than half that of 1872, and 23·61 *per cent.* below the average of eleven years. The only heavy fall of rain took place on the third of September (1·85 in.); on only one other day during the year (June 29th) did the fall amount to half-an-inch. One of the most noteworthy features of the year was the small amount of rain which fell in December (·64 in.).

WALTON-ON-THE-HILL, LIVERPOOL.—The year throughout has been much drier than 1872, the total rainfall for this year, being more than 21 inches less than last year. February, April, and December, were very dry, the fall for each of these months being under 1 inch. Taken on the whole, 1873 has been a good year in every respect. There have been 40 days more without rain, than last year, although still the number is more than usual. One noticeable point is, that during the whole of the year, the daily rainfall has only exceeded

half-an-inch on four occasions, the maximum fall on any day being only ·85 in. on the 6th of March.

South Shore, Blackpool.—The fall in 1873 is the least during 18 years, being only 26·27 or 5·83 below the average, and 21·08 below that of 1872, which was the maximum fall during the same period.

Caton, Lancaster.—Average of last 25 years very nearly 41·00; that in 1873 (37·13), was nearly 4·00 below it.

Broughton Hall.—Fall for the year very near the average.

DIVISION IX.

Hull, Beverley Road.—The rainfall in 1873 has been 22·09, the average (15 years) is 25·45, showing a deficiency in 1873 of 3·36, but there are 3 other years during the 15, having a smaller fall, viz. :— 1859, 21·12; 1862, 19·97; and 1864, 18·26.

Old Malton.—The rainfall of 1873 is less than half the fall in the preceding year, being 20·71, against 41·79; it is also the least fall for any year that has been registered during 15 years.

Grosmont.—The result for 1873 is something most extraordinary, under a third of what fell in 1872. The "oldest inhabitant" here does not remember anything like it.

DIVISION X.

West Hendon House, Sunderland.—1873 has been the driest year by 1·20 in. since 1860 inclusive; the rainfall (20·09 in.) being 16·77 in. less than in 1872! There was an excess of S.W. winds, and a deficiency of S. and S.E., as compared with the average. Each of the eight winds, especially the N.E., was drier than the average, except the S. wind, which brought much more rain than usual in proportion to the time it blew. Greatest depth of snow 3 in. on February 3; no snow fell in the latter part of 1873.

Braystones.—In the year 1873, the rain (36·62) was 15·29 inches less than 1872, and 0·57 less than the mean of the previous 9 years.

Mire House.—From the 27th of January to June unusually bright and fine but too droughty; bad hay crops. November and December, dull occasionally, but no fogs, and very mild.

Whinfell Hall.—Rain about 4 inches below the average, and so distributed as to render the hay harvest in this mountain district very difficult.

GREAT STRICKLAND.—The driest year I have ever recorded, and, perhaps, the coldest.

BROUGHAM HALL.—The fall in 1873 (27·86) is 8·34 below the mean of the 5 previous years.

WALES.

DIVISION XI.

TREVALYN HALL, ROSSETT.—The total rainfall was below the average, and a remarkable contrast to the extraordinary amount registered in 1872, the difference being no less than 25·71 inches. The months of February, April, and December, were unusually dry, and no decidedly wet month occurred during the year. The largest amounts (but in no case reaching 3 inches) were registered in March, July, and September. The mean temperature here was generally below the average, except in January and December. The summer months were cloudy, with occasional hot days. The *maximum* in shade reached 91°·6 on July 22nd, which is a very unusual temperature in this district, but on 24th the weather was quite cool again.

BRYN ALYN.—The fall (24·90) in 1873, but little more than three quarters of the average, in 1872 it was three quarters in excess.

SCOTLAND.

DIVISION XII.

DUMFRIES.—The fall for 1873 (37·01) is 13·25 in. less than that of 1872.

DIVISION XIV.

NEWTON, MEARNS.—A cold, wet stormy autumn, with very little growth. November and December fine.

DIVISION XV.

INVERARY CASTLE, ARGYLL.—The early part of the year was distinguished for very dry months, but since it changed for heavy rainfall

there has been no cessation of rain, and scarcely any sunshine; but the temperature has not been so low as might have been expected. Still it was low compared with 1872, and to this may be attributed the soundness of the potato crop, and the comparatively small loss of cereal crops, although they were imperfectly ripened. Our high ground along Loch Fyne continuing at a low temperature condensed the water in the air carried from the Atlantic, which came down in torrents over us all the summer, and winter too.

EALLABUS, ISLAY.—Total fall, 44·06, being 11·62 less than in 1872.

DIVISION XVI.

LENY.—Starlings have very largely increased in numbers of late years, thirty years since they were scarce, now there are flocks of them.

DIVISION XVII.

ARNHALL.—The wind was E. on 113 days, W. on 180, N. on 53, and S. on 19. The total rainfall (31·10) is 3·00 in. below the average of the last thirty years.

BOGSIDE, LEOCHEL CUSHNIE.—The fall of this year (35·19), though so very far (19·60) below that of the memorable 1872, is the largest fall registered here during the last fourteen years, except 1867, when the fall was 37·50, and of course excepting also 1872. This has been the mildest autumn for many years. The spring flowers were out, and buds just forming, on December 31st.

TILLYDESK.—Of the total fall (32·37) only 11·47, or little more than one-third, fell during the first six months. Cereal crops moderate in point of bulk, but superior in weight and quality of grain. Turnip crop the best ever known.

IRELAND.

DIVISION XXI.

FITZWILLIAM SQUARE, DUBLIN.—January, March, July, August, September, and October, were wet months, contributing 74·9 per cent. of the total fall in the year, and embracing 122 of the rainy days, leaving only 67 for the other six months. The weather was remarkably

dry from Nov. 13th to the end of the year, the total fall in seven weeks being only 1·13. Upwards of 1·00 fell on three days, viz., Jan. 15th 1·04, Sept. 13th 1·18, and Oct. 24th 1·17.

DIVISION XXII.

CREGG PARK.—The summer has been a very wet one, but the breaks of fine weather which occurred happened at such periods as to enable the farmers to save their crops in good condition, except hay, which suffered a good deal and was only saved at great expense of labour. The potato crop turned out a good average one, but such as became diseased, wasted away completely in the ground; this proved a source of loss, as in previous years; the diseased portion of the crop was turned to good account in feeding the pigs. Mushrooms have disappeared altogether. Snow fell on 15th, 19th, and 20th of January, 24th February, and 13th of March; that on 19th and 20th of January was 4 inches deep, but soon melted.

DIVISION XXIII.

FLORENCE COURT.—Rainfall for the year rather under the average: January wet, February, March, April, May, and June very dry months, July and August very wet, September, October, November, and December, moderate rainfall. Winter months mild, summer months not hot.

ALMA HOUSE, SYDENHAM.—The total rainfall of 1873 (36·54) was 16·46 less than that of 1872, but 2·95 above the average of the five years, 1867—71. If we include the excessively humid and apparently abnormal year 1872, the mean is raised to 36·82 with which the fall in 1873 almost exactly agrees. Again, the distribution was somewhat peculiar in 1873, whilst the summer months were decidedly humid, the closing months of the year were peculiarly dry, December ·95 (while in 1872 it had 7·32). The temperature of December, 1873, was high and spring like; vegetation very forward, the fields green, and wild strawberries, at an elevation of 500 feet, in full bloom at Christmas.

MONEYDIG.—Dry, cold spring, summer very wet from 2nd of July till 13th Sept. Harvest moderately good, part of it very fine. From the 9th of Oct. the weather was comparatively fine and mild. Very bad grass year, perhaps the worst during the last twenty; same as regards the honey bee, few if any having food enough to keep them alive

during the winter. Potatoes were an abundant crop, but many of them diseased.

CONVOY HOUSE, DONEGAL.—No excessive cold, and but little heat, the minimum temperature being 24° on the 19th Jan., and the maximum 72° on the 22nd of July; we had rather an unusual quantity of snow, which reached the depth of seven inches on the 21st of January. Cold nights, inclining to frost, throughout the year; remarkably severe in October. Not much T or L, but more last winter than usual; little high wind till October and November, when there was much stormy weather, sometimes rising to a high gale. Great part of July wet, and August particularly wet and ungenial. The spring months were dry with a constant succession of cold easterly winds. A bad year for fruit and flowers, but agricultural crops were good, and the harvest was beyond expectation, though the weather in September was broken. No cold up to the first of January, but very little sun all the year, and we may say we have had neither summer nor winter.

MOVILLE.—Spring unusually dry, very little rain from the beginning of March to the middle of May, summer and harvest wet, only twelve days without rain all the summer, counting from 20th of June to 20th of September. October very wet, November and December comparatively fine. Mean temperature of November 48°·1, mean of December 44°·2; snow fell on two days in January, five in February, and four in March, none since. Minimum thermometer indicated frost only four times in December; this has been the warmest December (except that of 1869, which was the same,) that I have noted since 1861, when I commenced observing. Primroses (I am told) were in flower in this neighbourhood on December 31st. Roses were in bloom in my own garden in December, and the grass is luxuriant.

HEAVY RAINS OF SHORT DURATION.

THE records of this class for 1873 are in no way remarkable, and they are far less numerous than we wish. One return is however a perfect specimen of what we require, and we therefore reproduce it *verbatim et literatim*, and hope that during the present year many of our friends will copy this good example :—

Heavy Falls in Short Periods.

DARTFORD, The Downs :—

1873.

June 29th. From 5 till 8 p.m., 1·08 in. ; wind E. ; clouds and rain from S.W.

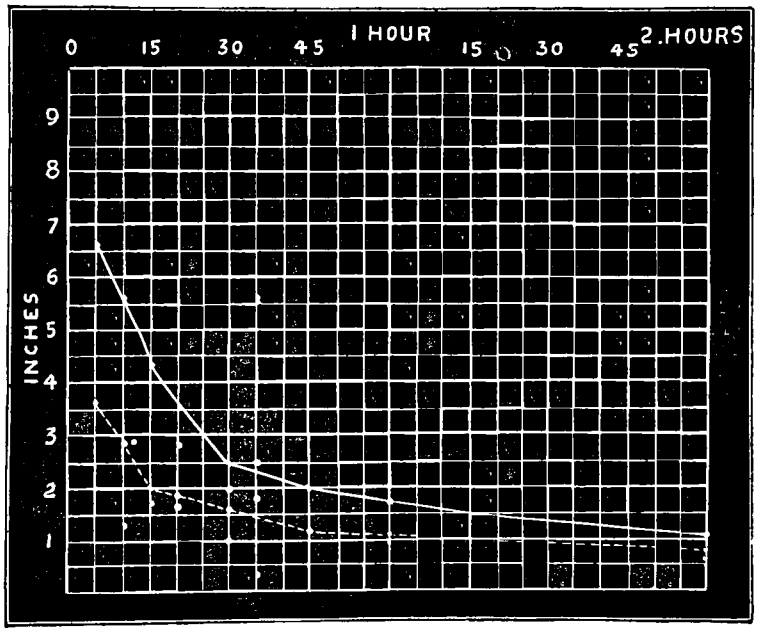
July 15th. From 12 noon till 12.11 p.m., 0·52 in. ; wind W.S.W.

Aug. 24th. From 5.57 p.m. till 6.16, 0·55 in ; wind E.S.E. ; clouds from S.

Sept. 3rd. From 12·55 p.m. till 1.12, 0·31 in.

R. F. JARVIS.

The falls recorded on the next page are represented in the annexed diagram, on which are also marked the hypothetical limits previously



suggested,* which, though partly confirmed by the limited experience of 1873, must still be understood to be subject to modification to any

* *British Rainfall*, 1872, p. 105.

extent. The vertical lines represent 5 minutes, the horizontal ones 0·50 in. The dotted curve shows the rates described in our last as "ordinary," and the continuous line those considered "extreme." It will be readily seen that very few of the falls in 1873 can be regarded as remarkable. That of 2·60 in one hour at Fettercairn is the most so, but we should have felt more certain of the accuracy of the observation had the time been anything else than the precise hour; an entry of fifty-five minutes, or of one hour five minutes, implies precision, while "an hour" *may* mean anything from forty-five minutes to an hour and an half. Of course the fall at this and other stations may have been the precise hour, but the chances are greatly against it.

Date.	Division.	Station.	Duration.		Amount.	Rate per hour.
1873.			hr.	min.	in.	inches.
April 6 ...	VII.	Lincoln (Branston Hall)...	...	5	·20	2·40
Aug. 24 ...	,,	,, ,, ,, ..	...	5	·15	1·80
,, 26 ...	III.	Cambridge (Granchester Mill)	...	10	·47	2·82
July 3 ...	XII.	Melrose	...	10	·25	1·50
,, 15 ...	II.	Dartford	...	11	·52	2·85
,, 12 ...	IX.	Hull (Beverly Road)	...	15	·34	1·36
Sept. 3 ...	II.	Dartford	...	17	·31	1·09
Aug. 24 ...	,,	,, ...	..	19	·55	1·74
July 23 ..	IX.	Leeds (Chapeltown)	...	20	·94	2·82
Oct. 3 ...	VII.	Lincoln (Branston Hall)...	...	20	·65	1·95
July 13 ...	II.	Croydon (Dingwall Road).	...	30	1·00	2·00
,, 23 ...	XVII.	Keith...	...	30	·51	1·02
June 29 ...	III.	Broughton, near Banbury.	...	35	1·45	2·48
Aug. 24 ...	IV.	Maldon (Cold Norton).....	...	35	1·05	1·80
July 28 ...	XVII.	Fettercairn	1	0	2·60	2·60
Aug. 19 ...	VII.	Coston	1	0	1·00	1·00
Oct. 1 ...	XIV.	Muirkirk (Irondale House)	1	0	1·00	1·00
July 22 ...	X.	Elterwater (Woodlands) ...	1	30	2·45	1·64
Oct. 2 ...	XIV.	Muirkirk (Irondale House)	2	0	2·07	1·04
Aug. 24 .	VI.	Orleton	2	0	1·40	·70
June 3 ..	VIII.	Manchester (Old Trafford).	2	0	1·37	·69
Sept. 14 ...	X.	Belford, (Middleton Hall).	2	0	1·72	·69
June 5 ...	V.	Tavistock (Kilworthy) ..	3	0	1·60	·53
,, 29 ...	IV.	Wetherden Rectory	3	0	1·00	·33
,, ,, ..	III.	Banbury (Kings Sutton)...	4	0	1·72	·43
,, ,, ...	VII.	Leicester (Freeman's Com)	4	0	1·61	·40
,, ,, ...	VI.	Ross (The Graig)	4	30	1·54	·34
Aug. 28 ...	XI.	Rhayader (Cefnfaes)	5	0	2·05	·41
June 29 ...	IV.	Sprowston (Oak Lodge) ...	5	0	1·01	·20
,, ,, ...	VI.	Ross (The Graig)	5	50	1·82	·31
Aug. 24 ...	V.	Dartmoor	6	0	1·45	·24
July 13 ...	IV.	Stowmarket (Wetherden)	6	0	·85	·14

THE PRINCIPAL HEAVY RAINS OF 1873.

NOTE.—The letter M throughout this article is used as an abbreviation of the term, "Maximum daily rainfall during the year." The day being in all cases, where not otherwise specified, the rainfall day, terminating at 9 a.m. on the succeeding civil day.

The amounts and per-centages given for each date are usually only those in which either (1) upwards of 2 inches fell, or (2) the fall was more than 5 per cent. of the total yearly amount. In certain cases even these limits have been raised, in order to avoid printing needless masses of figures, and yet draw attention to the leading features of the respective cases.

JANUARY 18TH.

This was the first heavy rain for the year which was at all general. It was the **M** at about one-twentieth of the stations, the counties in which they were situated being Wiltshire, Devonshire, Cornwall, Somersetshire, and Gloucestershire; in none of these, however, was the fall excessive, seldom amounting either to 2 in., or to 4 per cent. The fall was heavier in South Wales, and in the neighbourhood of Keswick and Penrith; the highest per-centage being at Appleby in Westmoreland :—

X.	Kielder Northumberland	2·09	=4·5
,,	Keswick Barrow House .	2·46	3·6
,,	,, Deer Close.....	2·13	3·8
,,	Bridge End	3·17	3·2
,,	Elterwater	2·98	3·3
,,	Crosby Ravensworth ...	2·20	5·4
,,	Reagill.....	1·74	5·0
X.	Appleby	2·66	=9·2
XI.	Llanfrechfa Grange.....	2·57	6·3
,,	Aberdare	2·25	4·2
,,	Treherbert	3·05	3·6
,,	Mardy	2·61	4·5
XII.	Kirkpatrick Juxta.....	3·10	4·8

The remarkable coincidence that at Crosby Ravensworth precisely the same amount fell on Jan. 17th, 1872, as on Jan. 18th, 1873, and that in that case, as in the present, it was the heaviest fall in the year, is perhaps worthy of notice.

FEBRUARY 1ST.

A heavy, but not exceptional rainfall on Dartmoor, and at several surrounding stations.

V.	Prison Reservoir	2·90	= 4·3	per cent.
,,	Zeal Monachorum	2·20	5·8	,,

FEBRUARY 24TH.

Heavy rain in the neighbourhood of Exeter and St. Austell.

V.	Manston Terrace, Exeter	2·47	= 7·3	per cent.

MARCH 6TH.

Moderate rain in West and North Lancashire, South West Cumberland, and the Isle of Man.

VIII.	Monk Coniston	2·10	= 2·8	per cent.
X.	Bootle	2·00	5·1	,,

MARCH 16TH.

The M at most stations in Gloucestershire, and at a few in adjacent counties :—

VI.	Barnwood House, Gloucester	1·30	= 5·4	per cent.
,,	County Asylum, ,,	1·17	5·3	,,
,,	Whitchurch	1·50	5·5	,,
VII.	Stony Middleton	2·45	7·9	,,

APRIL 16TH.

This was the day on which the great flood occurred at Llanfairfechan, N. Wales,* and it is a singular proof of its extremely local character, that not only was the fall at Llanfairfechan itself only 1·00, but at no other N. Wales station did it reach even that amount.

There would appear to have been a somewhat heavy local rain in the south of Radnor, but it was quite independent of the Llanfairfechan downpour.

XI.	Brecon	2·30	= 6·4	per cent.
,,	Heyope	1·01	2·8	,,

MAY 9TH.

Moderate rain at a few detached stations near Leeds, and at several stations in the east of Perthshire and west of Forfar.

XVI.	Belmont Castle.....	1·40	= [illegible]	per cent.
,,	Dundee	1·59	5·7	,,
,,	,, E. Necropolis	1·45	5·2	,,
,,	Kettins	1·52	5·1	,,

* See *Meteorological Magazine*, vol. viii., p. 58.

JUNE 29TH.

With one exception this was the heaviest rain of 1873. It was the M at 90 stations, or one-ninth of all those discussed for the preparation of this article. It was heaviest in the Midland counties, and nearly equally severe in Northampton, Birmingham, and Burton-upon-Trent.

The general character of the area visited is shown by the following map.

In order to keep the following table within reasonable bounds, we have only quoted those falls which amounted to 2½ in., or 7 per cent.

III.	Buckngham Cstle Flds	2·43=	9·4	VI.	Burton-on-Trent	2·09=	9·5
,,	Addington Manor ...	2·65	9·8	,,	,, Horninglow...	2·45	10·7
,,	Stratton Audley Park.	2·12	9·2	,,	Malvern, Church st. .	2·01	8·0
,,	Thorpe Mandeville ...	1·72	7·2	,,	Bromsgrove	1·83	8·3
,,	Northampton	1·52	7·2	,,	Winterfold.....	2·24	9·7
,,	Althorp.....	2·68	10·7	,,	Hagley Rectory	2·50	9·2
,,	Wellingboro'.....	1·50	7·1	,,	Edgbaston.....	2·41	10·0
IV.	Sudbury	1·75	8·0	VII.	Leicestr, Belmont vills	2·26	8·1
VI.	Fownhope.....	1·75	7·0	,,	Thornton	1·69	7·0
,,	Richmond place	1·69	7·0	,,	Cropstone	1·83	8·0
,,	Stretton Rectory	1·77	7·4	,,	Bretby park, Burton .	1·75	7·0
,,	Tamworth.....	2·10	8·7	,,	Winshill	2·10	9·5
,,	Rodbaston.....	1·75	7·3				

JULY 3RD.

An unimportant M at 18 detached stations, principally in South Notts and in East Yorks.

VII. Trent College 1·33 = 6·3 per cent.

JULY 13TH.

Although at upwards of 100 stations this was the M, it cannot be called an important rain, for it becomes the M solely through the

absence of any very heavy fall during 1873. It was almost entirely confined to the S.E. of England, and is really unworthy of further notice than is afforded by the following epitome.

Limits 2½ in., or 6 per cent.

II.	Farnham	1·72	=7·2
,,	Northbourne Chobham .	1·65	7·8
,,	Petersfield	2·00	6·4
,,	Selborne	2·16	7·0
,,	Basingstoke	1·70	7·4
,,	Reading	1·79	8·1

JULY 22ND.

A moderately heavy fall at a few isolated stations.

X.	Gainford, Darlington.	1·46 = 7·0	per cent.
,,	Loughrigg, Ambleside	2·45	3·1 ,,
XXI.	Rockville, Dublin ...	2·04	8·2 ,,
,,	Easton Lodge, Dublin	1·95	8·5 ,,

JULY 27TH.

The M at a dozen detached stations between Leeds and Rossshire.

XVII. Fettercairn, Kincardine 2·60 = 7·5 per cent.

AUGUST 18TH.

The M in Lincolnshire, but not a heavy fall.

VII.	Thistleton, Rutland ...	1·11	=5·0
,,	Longhills, Lincoln ...	1·45	6·6
,,	Branston Hall ,, ...	1·37	6·5
,,	Killingholme	1·37	6·2
VIII.	Newtn Nursries, Chester	1·35	5·6

AUGUST 24TH.

There appear to have been two separate districts in which the M occurred on this date—one in Devonshire, the other between the Thames and the Wash. We separate them, because between the two districts very little rain fell, and at only a single station (Welford, near Newbury) was it the M.

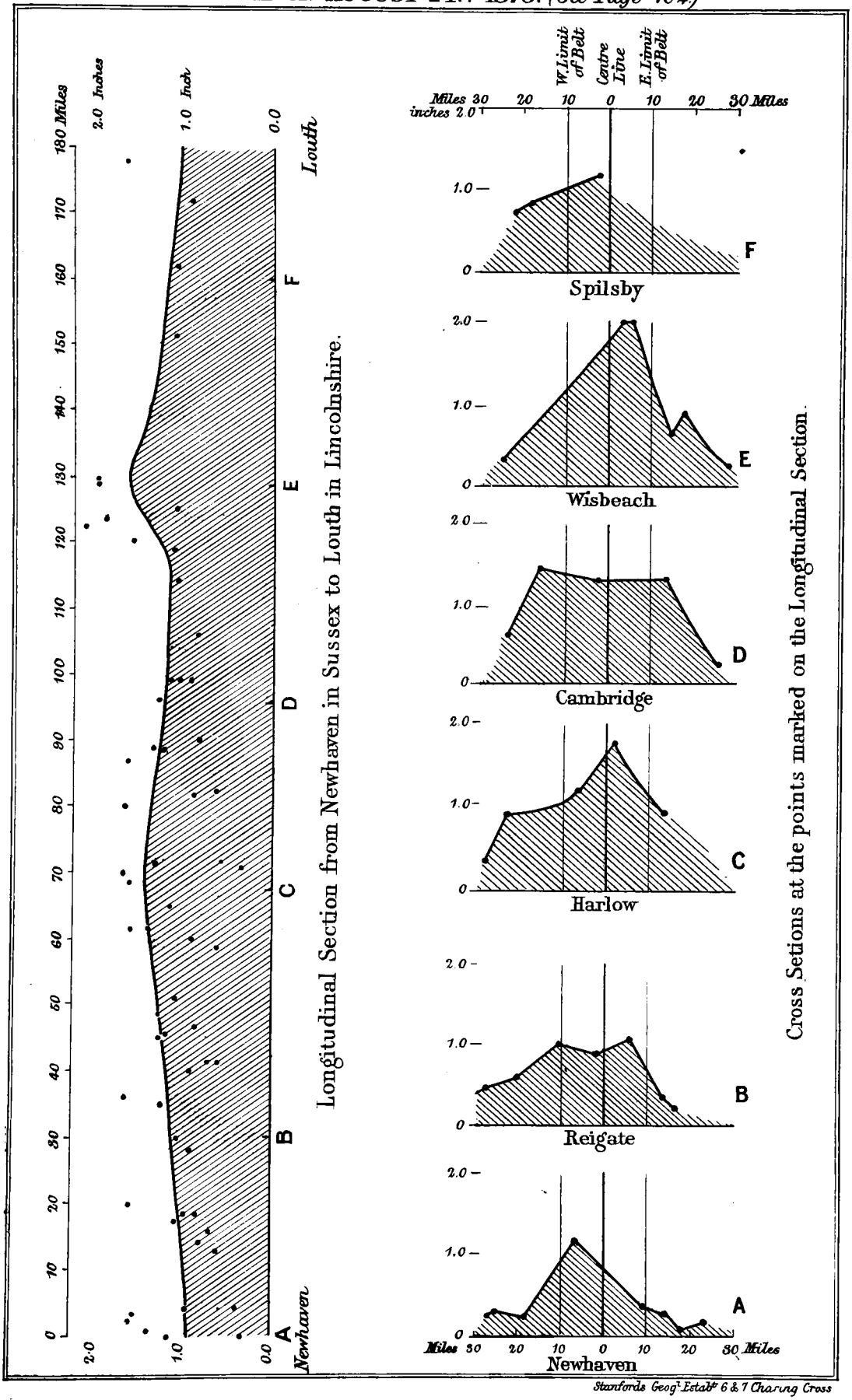
V.	Exeter Institution	2·08 = 6·1	per cent.
,,	Brampford Speke, Exeter	1·83	5·5 ,,
,,	Rose Ash, South Molton	2·17	5·3 ,,
,,	Bratton Fleming, Barnstaple .	2·04	3·9 ,,

The actual amounts were less in the other district, but occurring in a locality very much drier, the per-centages are much greater.

Limits 2·00, or 6 per cent.

III.	Guilden, Royston	1·39	=6·9	III.	Observatory, Wisbech	2·00	=8·7
,,	Abington Pigotts	1·27	6·0	IV.	Purleigh Rectory, Maldon	1·38	6·6
,,	Grnchestr Mill, Cmbrdge	1·35	6·4	,,	Waltham Abbey	1·60	6·9
,,	Outwell	1·93	9·0	,,	Sheering Rectory, Harlw	1·68	6·7
,,	Marmont Priory, Upwell	2·12	9·2	,,	Moor hall, Harlow	1·73	6·9
,,	Harecroft house, Wisbch	2·00	8·7	VII.	Louth	1·72	6·9

RAINFALL ON AUGUST 24TH 1873. (See Page 104.)



Longitudinal Section from Newhaven in Sussex to Louth in Lincolnshire.

Cross Sections at the points marked on the Longitudinal Section.

Stanfords Geog[l] Estab[t] 6 & 7 Charing Cross

It is very remarkable that, with the exception of Purleigh, these stations are all within a belt less than 20 miles wide, but more than 100 miles long. Further investigation showed that the area of rainfall was sharply defined, and finally we believe that we are in a position to explain its precise character more fully than has ever been done for any previous fall.

The first step was to tabulate all the entries for this date which could throw any light upon the question; for this purpose about 200 were extracted and plotted. From this examination it appeared that the belt of maximum fall was usually about 20 miles broad, and that starting from Louth its centre went about S. $2\frac{1}{2}°$ E. as far as the Thames, and thence S. 4° W. to the Sussex coast at Newhaven. The belt was therefore assumed to be bounded by lines parallel to the above centre line, and 10 miles East and West of it respectively.

The following table contains *every record* which we possess from within this belt, arranged in the order of the distance of the stations northwards from Newhaven, and gives the whole of the data employed in the longitudinal section hereinafter described:—

Miles.	Stations.	Ins.
1	Meads, Eastbourne	·36
3	Buckingham-place, Brighton M	1·17
3	Lewes-road, ,, M	1·38
5	Glynde, Lewes	·98
6	Hailsham	·40
7	Poyning M	1·51
7	Fulking M	1·54
12	Framfield, Uckfield	·57
14	Hayward's heath	·73
14	Buxted park	·64
16	Forest lodge, Maresfield	1·03
19	Crowborough Observatory	·84
20	Balcomb place	·99
21	Eridge M	1·60
22	East Grinstead	1·05
28	Edenbridge	·93
30	Tunbridge	1·01
35	Riverhill, Sevenoaks M	1·30
36	Riverhead ,, M	1·74
40	Bromley	·92
41	Parkside, Beckenham	·62
41	Foxgrove ,,	·61
45	Eltham M	1·27
46	Dartford M	1·23
47	Deptford	·86
48	Crossness M	1·28
52	Barking M	1·06
58	Brentwood	·58
60	Enfield	·86
63	Waltham Abbey M	1·60
63	Epping M	1·40
67	Fields Weir	1·15
69	Sheering, Harlow M	1·68
70	Moor hall ,, M	1·73
72	High Roding	·36
72	Much Hadham M	1·37
74	Dunmow	·55
80	Aspenden M	1·70
83	Audley end	·91
84	Saffron Walden	·62
87	Royston	1·71
89	Guilden, Royston M	1·39
89	Abington Pigotts M	1·27
94	Pampesford hall	·74
96	Granchester Mill M	1·35
98	Beech house, Cambridge M	·98
98	Observatory ,, M	1·20
98	Merton villa ,, M	1·12
107	Stretham, Ely	·79
115	Horseway Lock, Chatteris M	1·09
119	Whittlesea Mere	1·14
121	March M	1·56
124	Marmont priory M	2·12
125	Outwell M	1·93
125	Coldham hall, Elm	1·08
129	Harecroft house, Wisbech M	2·00
129	Observatory ,, M	2·00
152	Boston	1·10
162	Miningsby M	1·15
173	Calcethorpe	·96
178	Louth M	1·72

The next table gives all the instances of falls exceeding three-quarters of an inch outside of this belt, but within 20 miles on either side :—

Warbledon Rectory	·88	Wrestlingworth ..... M	1·47
Earlswood	1·00	Chevely	1·38
Sittingbourne	·81	Tetworth	·97
Balham	·76	Waresley	·92
Guildhall	·75	Bury St. Edmunds, Beech Hill	·97
Camden Square	·87	Culford	·82
Harrow	·75	Huntingdon	1·24
Purleigh, Maldon ..... M	1·38	Conington	·80
Cold Norton ,, ... M	1·47	Standground Sluice	·77
Bayfordbury	·90	Wereham ..... M	1·20
Chelmsford	·95	West Dereham	·78
Braintree	·87	Fincham Rectory	·90
Stotfold	·83	Branston Hall	·79
Sandy Rectory	·84	Lincoln County Asylum	·99

The contrast of these two tables is even more evident from the following analysis :—

		In Belt		In side Zones.	
		Number	Per Cent.	Number	Per Cent.
Total number of Falls		61	100	110	100
,, ,, exceeding	·25	61	100	96	87
,, ,, ,,	·50	58	95	65	59
,, ,, ,,	·75	49	80	26	24
,, ,, ,,	1·00	38	62	6	5
,, ,, ,,	1·25	24	39	4	4
,, ,, ,,	1·50	15	25	0	0
,, ,, ,,	1·75	4	7	0	0
,, ,, ,,	2·00	1	2	0	0

We need only mention one further fact to render complete the statistical evidence of the distribution having been that which we described.

From the two zones, one on each side of the centre belt there are 110 records and the average amount is ·58.
From the centre belt 60 ,, ,, ,, ,, ,, 1·16.

This shows the singular fact that the fall in the centre belt was exactly twice as heavy as in that on either side of it.

In order to make these general features evident to all our readers, we have thrown part of the data into a series of sections, one longitudinal, from Newhaven to Louth, embraces all the records given in the table on p. 105, the others cross sections at intervals of about 30 miles, the distances being slightly variable in order that they may pass through those localities whence the most complete evidence had been received. The data for the longitudinal section have already been given ; those for the cross sections, taken from W. to E. are as follows :—

DIV.	Miles from Centre Line.		Inches.	DIV.	Miles from Centre Line.		Inches.
		Section through Newhaven, 0 miles from Newhaven.		III.	2 E.	Sheering	1·68
				,,	14 ,,	Chelmsford	·95
II.	26 W.	Yapton	·32				
,,	27 ,,	Dale Park	·30			*Section through Cambridge, 96 miles from Newhaven.*	
,,	18 ,,	Worthing	·27				
,,	7 ,,	Brighton	1·17	III.	23 W.	Cardington	·56
,,	10 E.	Eastbourne, Meads ...	·36	,,	16 ,,	Wrestlingworth ...	1·47
,,	14 ,,	Pevensey Vicarage ...	·25	,,	2 ,,	Granchester Mill ...	1·35
,,	19 ,,	Battle...	·06	,,	14 E.	Cheveley	1·38
,,	23 ,,	Hastings, The Hollies.	·19	IV.	26 ,,	Barton Hall	·30
		Section through Reigate 30 miles from Newhaven.				*Section through Wisbeach, 129 miles from Newhaven.*	
II.	30 W.	Guildford	·48	VII.	25 W.	Thistleton	·42
,,	27 ,,	Albury	·50	III.	5 E.	Wisbeach, Harecroft House	2·00
,,	20 ,,	Dorking	·58				
,,	11 ,,	Earlswood	1·00	,,	5 ,,	Wisbeach Observatory	2·00
,,	2 ,,	Edenbridge	·93	IV.	15 ,,	Bexwell	·64
,,	6 E.	Tunbridge	1·01	,,	18 ,,	Fincham	·90
,,	14 ,,	Hunton Court ..	·35	,,	26 ,,	Swaffham	·38
,,	16 ,,	Linton Park	·27	,,	28 ,,	Pickenham .. .	·30
		Section through Harlow 68 miles from Newhaven.				*Section through Spilsby 160 miles from Newhaven.*	
III.	30 W.	Berkhampstead ...	·40	VII.	22 W.	Navenby	·65
,,	27 ,,	Hemelhempstead ...	·34	,,	19 ,,	Branston Hall ...	·79
,,	24 ,,	Bayfordbury	·90	,,	3 ,,	Miningsby	1·15
,,	7 ,,	Field's Weir	1·15				

A map of that portion of England over which this rain prevailed forms the frontispiece to the present volume, the quantity of rain or its absence being indicated by certain symbols explained upon the map.

The accompanying lithograph shows that the fall was nearly equal throughout the whole length of the centre belt, and the cross sections show how rapidly the amount decreased east and west of the centre line.

We should be obliged indefinitely to extend the limits of this work if we discussed not only the *quantity* of rain but also the causes which produce it; having however treated this fall at some length, it cannot be amiss to devote a line or two to stating that the Daily Weather Charts for the morning of the 25th show a S.E. wind over England, and a N.W. on the coast of Norway.

SEPTEMBER 3RD.

Local rain in Denbighshire and vicinity.

VIII. Hinderton ..... 1·85 = 8·4 per cent.

SEPTEMBER 13TH.

The **M** at a few stations in Devon and Somerset, and at some stations in the S.E. of Ireland.

SEPTEMBER 14TH.

The **M** occurred on this day at a few stations in Surrey and Sussex, at three isolated stations in the N. of England and in Scotland, and at several in the S.E. of Ireland.

II.	Albury, Guildford	1·50	= 5·8	per cent.
IX.	Leventhorpe, Leeds.....	1·16	5·8	,,
X.	Middleton Hall, Belford...	1·72	6·6	,,
XVII.	Arnhall, Kincardine	3·00	9·7	,,
XXI.	Tullogher, New Ross	2·55	5·8	,,
,,	Woodstock, Kilkenny.....	2·03	5·1	,,
,,	Glasnevin, Dublin	1·34	5·4	,,

SEPTEMBER 30TH.

This was the **M** at the majority of stations in the S. and E. of Scotland, and in the N. of Ireland.

XII.	Carsphairn	2·21	= 3·9	per cent.
XII.	Wanlockhead.....	2·70	3·8	,,
XIV.	Newmains	2·35	4·7	,,
,,	Pinmore, Girvan	2·53	5·6	,,
,,	Hole House.....	2·94	6·8	,,
,,	White Hill	2·62	5·2	,,
,,	Cumnock.....	2·48	5·7	,,
,,	Irondale House	2·92	5·1	,,

OCTOBER 2ND.

The area of **M** on this day is very sharply defined; it was entirely enclosed in a triangle, of which Whitby, Kirkcudbright, and St. Abb's Head form the three angles.

X.	Wylam.....	1·14	= 6·0	per cent.
X.	Howick	1·55	6·8	,,
X.	North Sunderland.....	1·82	7·9	,,
XII.	Melrose	2·04	7·1	,,
,,	Springwood Park	1·60	7·3	,,
,,	Wooplaw.....	2·08	6·3	,,
XIII.	Galashiels	2·03	6·5	,,
,,	Swinton Manse	1·90	6·4	,,
,,	Mungo's Walls	1·50	5·4	,,

OCTOBER 12TH.

A very unimportant rain, but the M at 25 stations, between Croydon and Yarmouth.

I.	Mile End, London	1·43	= 6·8	per cent.
,,	St. Mary's-rd. ,, ...	1·13	5·1	,,
,,	Upper Clapton ,, ...	1·10	5·2	,,
II.	Croydon	1·42	5·4	,,
,,	Richmond	1·07	5·1	,,
IV.	Wetherden, Stowmarket.	1·07	5·1	,,

OCTOBER 25TH.

Local M in East Kent.

II.	Bridge-st. Canterbury ...	1·46	= 5·6	per cent.
,,	Acol, Margate	1·12	6·6	,,

NOVEMBER 5TH.

The M occurred on this date at several stations in the S.W. of England, and also at a few in the S. of Yorkshire, but the amounts are not large.

V.	Shaftesbury.....	1·83	= 6·3	per cent.
,,	Budleigh Salterton	1·95	5·7	,,
,,	Ilchester	1·40	5·2	,,
IX.	Tickhill	·98	5·4	,,
,,	Doncaster	1·04	5·8	,,

NOVEMBER 6TH.

This was also a day on which the M occurred at a considerable number of stations both in Yorkshire and in the N.E. of Scotland. The former group are in no respect worthy of note—the latter are, for they show the rain to have been a good example of the heavy rains which occur in Aberdeenshire and other counties on the east coast. In order to render the following table complete it is extended so as to include every station at which even one inch of rain fell, and whether it was the M or not. Among the principal facts which this teaches we may select two—

(1) That the area upon which at least two inches of rain fell was not less than 2,500 square miles; how many millions of gallons this must have been, or how many cubic miles of air must have been drained of their vapour, to form this enormous volume of water, we leave others to calculate.

(2) It is instructive to notice how little of the rain succeeded in passing the lofty barrier of the Cairngorm Hills. Along Deeside from Aberdeen to Braemar, the fall averaged 2·40 in.; it was 2·70 in the

extreme E., and 2·40 at Braemar in the W., or only a decrease of 0·30 for fifty miles; at the same rate the fall at Aviemore should have been about 2·20, but it was only 0·60, and the correctness of this record is amply proved by the records of other stations on the Highland line—

XVI.	Craigton		1·00	=2·5
,,	Arbroath .....M		1·05	3·6
,,	Montroseness		1·30	5·0
XVII.	Fettercairn		2·10	6·0
,,	Braemar.....		2·14	5·1
,,	Coldstone School	M	2·55	7·7
,,	,, Manse ...	M	2·46	7·7
,,	,, Loanhead	M	2·43	8·1
,,	Aberdeen	M	2·73	8·3?
,,	Girdleness.....	M	2·55	11·1
,,	Blackstock	M	2·01	5·9
XVII.	Bogside.....	M	2·00	=5·7
,,	Inverury	M	2·50	7·3
,,	Tomintoul.....	M	1·80	5·6
,,	Wester Elchies...	M	1·55	4·6
,,	Old Deer	M	1·35	4·1
,,	Keith.....	M	2·38	6·8
,,	New Pitsligo ..	M	2·03	5·6
,,	Elgin		1·90	5·4
,,	Kinnaird Head...M		1·80	5·1
,,	Forres		1·01	3·4

MAXIMUM FALLS IN 1873.

As may have been inferred from the preceding article the analysis of the whole of the records of Maximum Daily falls during 1873 shows them to have been less than usual, in fact less than in any other of the past nine years, except 1870. The number of records discussed for this purpose is larger than in any previous year, and was 809; the magnitude of this number in no way affects the results, except so far as to give to them the importance due to the mass of details upon which they are founded.

The mode of compiling the following table has been fully explained in previous volumes; it is, therefore, only necessary to give such a cursory description as shall enable the foundation of the calculation to be easily understood. The first column needs no explanation; the the second states the number of records employed, and from each of which the following data are extracted:—(1) total fall in year; (2) greatest fall in any 24 hours; (3) date on which it occurred. From (1) and (2) the per-centage which the individual fall is of the yearly total is computed.

By this process entries such as the following are obtained:—

Division	XIV.
Name of Station	*Irondale Ho., Lanarkshire.*
Greatest Fall in 24 hours	2·92 inches.
Date thereof	September 30th.
Total Fall in Year..	56·56 inches.
Per-centage of total	5·2

From upwards of *eight hundred* records like the above the last line but one of the following table has been formed.

From the last line we learn that (1) many more records have been discussed than in previous years; (2) the proportion of the total yearly rainfall which fell in any 24 hours is much the same as the average; (3) that the maxima were decidedly small, in fact nearly 10 per cent. less than usual, and less than in any recent year except 1870.

Year.	Number of Returns.	Mean Per-centage.	Mean Amount.	Mean Total Fall in year.	1867 being assumed =100.	Ratio of Rainfall to the Mean.	Total Fall being assumed =34 in. Mean Max. =
1865	481	5·1	1·70 in.	33 in.	106	102	5·00 per cnt.
1866	590	3·7	1·48 ,,	40 ,,	129	119	4·36 ,,
1867	584	4·6	1·44 ,,	31 ,,	100	100	4·24 ,,
1868	676	4·3	1·43 ,,	33 ,,	106	106	4·21 ,,
1869	637	4·2	1·42 ,,	34 ,,	108	101	4·18 ,,
1870	687	4·9	1·30 ,,	27 ,,	81	82	3·82 ,,
1871	752	4·9	1·49 ,,	30 ,,	98	97	4·38 ,,
1872	743	3·4	1·59 ,,	47 ,,	151	136	4·68 ,,
Mean ...	644	4·4	1·48	34	110	105	4·36 ,,
1873	809	4·6	1·35	29	94	95	3·97 ,,
Diff.....	+165	+ ·2	— ·13	— 5	— 16	— 10	— ·39 ,,

Having determined the character of these falls in the aggregate, the next step is to select the most remarkable either for largeness of amount or of per-centage; by this means the following tables are formed:—

ABSTRACT OF MAXIMUM FALLS IN 1873.

Largest Falls.

Date.	Div.	Stations.	Depth.	Per cent.	Fall in year.
Oct. 9 ...	X.	Seathwaite.....	4·20in.	2·9	146·53 in.
Jan. 16 ...	IX.	Oughtershaw.....	3·20 ,,	5·2	61·35 ,,
,, 18 ...	X.	Bridge End	3·17 ,,	3·2	100·20 ,,
,, ,, ...	XII.	Kirkpatrick Juxta	3·10 ,,	4·8	63·77 ,,
,, ,, ...	XI.	Treherbert.....	3·05 ,,	3·6	84·59 ,,
Sept. 14 ...	XVII.	Arnhall	3·00 ,,	9·7	31·10 ,,
Jan. 18 ...	X.	Elterwater.....	2·98 ,,	3·3	91·37 ,,
Sept. 30 ...	XIV.	Holehouse	2·94 ,,	6·8	42·86 ,,
,, ,, ...	,,	Irondale House..... ..	2·92 ,,	5·2	56·56 ,,
Feb. 1 ...	V.	Dartmoor	2·90 ,,	4·3	67·29 ,,
June 29 ...	VI.	Oscott, St. Mary's College ...	2·77 ,,	11·8	23·39 ,,
Sept. 30 ..	XII.	Wanlockhead	2·70 ,,	3·8	71·92 ,,
June 29 ...	III.	Althorp	2·68 ,,	10·7	24·66 ,,
Jan. 18 ...	X.	Appleby.....	2·66 ,,	9·2	29·03 ,,
June 29 ...	III.	Addington.....	2·65 ,,	9·8	27·02 ,,
Sept. 30 ...	XIV.	Whitehill	2·62 ,,	5·2	50·28 ,,

Largest Per-centages.

Date.	Div.	Stations.	Per cent.	Depth.	Fall in year.
June 29 ...	VI.	Oscott, St. Mary's College ...	11·8	2·77in.	23·39 in.
,, ,, ...	III.	Althorp	10·7	2·68 ,,	24·66 ,,
,, ,, ...	VI.	Burton-on-Trent, Horninglow	10·7	2·45 ,,	23·23 ,,
,, ,, ...	,,	Edgbaston	10·0	2·41 ,,	24·28 ,,
,, ,, ...	III.	Addington.....	9·8	2·65 ,,	27·02 ,,
,, ,, ...	VI.	Winterfold	9·7	2·24 ,,	22·61 ,,
Sept. 14 ...	XVII.	Arnhall	9·7	3·00 ,,	31·10 ,,
June 29 ...	VII.	Winshill	9·5	2·10 ,,	22·30 ,,
,, ,, ...	,,	Burton	9·5	2·09 ,,	22·23 ,,
,, ,, ...	III.	Buckingham	9·4	2·43 ,,	25·88 ,,
Jan. 18 ...	X.	Appleby.....	9·2	2·66 ,,	29·03 ,,
June 29 ...	III.	Stratton Audley	9·2	2·12 ,,	22·51 ,,
,, ,, ...	VI.	Hagley	9·2	2·50 ,,	26·68 ,,
,, ,, ...	,,	Tamworth	8·7	2·10 ,,	24·15 ,,
Aug. 24 ...	III.	Harecroft House	8·7	2·00 ,,	22·92 ,,
,, ,, ...	,,	Wisbeach Observatory.....	8·7	2·00 ,,	23·39 ,,

These tables bring into a very compact form the record of all the greatest falls of the year, and convey much information in a very small space.

It is, however, necessary to compare them with similar data for previous years; this is done in the following abstracts:—

Largest Falls.

	Mean.			Absolute.			
Years.	Depth.	Per Cent.	Mean total fall at these stations.	Depth.	Per cent.	Station.	Division.
	in.		in.	in.			
1865 ...	3·67	6·4	61·8	6·41	5	Seathwaite.....	X.
1866 ...	3·40	4·4	86·2	6·38	4	Seathwaite.....	X.
1867 ...	3·17	9·0	42·5	4·78	16	Hartlip	II.
1868 ...	3·32	6·1	65·9	5·60	5	Camusinas.....	XV.
1869 ...	3·68	5·0	77·7	6·70	4	Seathwaite.....	X.
1870 ...	3·20	7·5	43·8	6·00	17	Tongue	XIX.
1871 ...	3·08	5·7	61·6	4·24	10	Melbury.....	X.
1872 ...	4·10	6·6	73·1	5·82	3	Seathwaite.....	X.
Mean ...	3·45	6·3	64·1	5·74	8	.....	...
1873 ...	2·97	6·2	60·7	4·20	3	Seathwaite.....	X.
Diff. ...	—·48	—·1	— 3·4	—1·54	—5	.....	...

Largest Per-Centages.

Mean.				Absolute.			
Years.	Per Cent.	Depth.	Mean total fall at these stations.	Per cent.	Depth.	Station.	Division.
		in.	in.		in.		
1865 ...	9·9	2·62	28·4	13·0	4·40	Fleckney	VII.
1866 ...	8·1	2·31	29·3	10·0	2·48	Burton	VI.
1867 ...	11·0	2·85	25·3	16·0	4·78	Hartlip	II.
1868 ...	8·6	2·55	30·1	11·0	4·00	Tongue	XIX.
1869 ...	7·9	2·17	27·9	10·0	3·40	Tillydesk	XVII.
1870 ...	10·0	2·34	22·9	17·1	6·00	Tongue	XIX.
1871 ...	9·0	2·43	26·8	11·5	3·62	Warter	IX.
1872 ...	8·1	3·43	42·5	10·0	3·70	Hillington Hall	IV.
Mean...	9·1	2·59	29·2	12·3	4·05	.....	...
1873 ...	9·7	2·39	24·7	11·8	2·77	Oscott.....	VI.
Diff. ...	+ ·6	—·20	— 4·5	— ·5	—1·28	.....	...

From these it appears that there have been fewer heavy rains than in any of the previous eight years, and that the max. for the year (4·20) is also the least since 1864. The same feature is shown by the abstract of the per-centages, for the + sign in the first column merely results from the year generally having been a dry one.

It therefore appears both from the aggregate values and the selected extremes, that heavy falls of rain were unusually rare during 1873.

ON THE MONTHLY FALL OF RAIN IN THE BRITISH ISLES DURING 1873.

In order to facilitate comparison with previous years, the returns quoted in the following tables are, in as many cases as possible, from the same gauges and the same observers as in previous years, and no alteration has been made in the arrangement, for we do not know how to improve upon it.

JANUARY.

The rainfall of this month was very heavy, more generally so than any other month of the year. The excess was greatest in South Wales and in Roxburghshire, in both of which districts more than one quarter of the amount in the whole year fell in that one month. At Brecknock the fall in January was 9·74, which was greater than the total of the four following months, February, March, April, and May. At New Castleton, Roxburgh, the fall was 12·70, and exceeded the collective totals of the *six following months*, February to July, both inclusive.

The total fall in January exceeded 10 in. at 41 stations, and at the undermentioned exceeded *twenty inches*:—

X.	Seathwaite	28·62	
,,	Wythburn	22·25	
,,	Little Langdale, Bridgend.	22·88	
,,	Woodlands, Elterwater	20·09	
,,	Mardale	25·00	
,,	Easedale, Grasmere	21·06	
X.	Patterdale	26·03	
,,	Greenside Mines	28·50	
,,	Martindale	21·80	
XI.	Bryn Gwynant	21·46	
XV.	Bridge of Orchy	31·70	

FEBRUARY.

South of a line joining Cardigan and Lincoln there was a slight excess of rain, and even a considerable one in Cornwall, where the

fall was nearly equal to that in January; but in most other parts it was very dry, especially in the English lake district, and at several stations in Wales, Scotland, and Ireland.

MARCH.

Rainfall still in excess in the south-west of England, in South Wales, and the south-east of Ireland, but below the average in most other parts.

APRIL.

Remarkably dry month; rainfall below the average at almost all stations, and extremely small at many of them. Three observers between Leeds and Edinburgh report that *no rain* fell during the month, and several others return amounts of less than 0·10 in. The drought appears to have been most severe on the northern side of the Cheviots.

MAY.

Rainfall near the average; above it in Aberdeenshire, South Wales, and at a few isolated stations; below it at nearly all stations on the coast of the English Channel or the Irish Sea.

JUNE.

A dry month, rainfall below the average at all stations except a few in the Midland counties, (where the total was increased by the heavy thunderstorm rain on the 29th), and excepting also a few in the extreme N. and N.W. of Scotland. It was the driest month in the year in the counties of Selkirk and Ayr.

JULY.

Taken generally this must be described as a wet month even for July. In the eastern part of England the amount was near the average, at a few stations it was below it, but over the greater part of the kingdom it was above the average, and in the north-western counties of England and in Ireland, it was twice the average.

AUGUST.

Another wet month, wetter than July, which is unusual. The excess was in the same districts as in the previous month, and also in the south-western counties of England, and the stations which had less than their average were again on the east coast.

SEPTEMBER.

About an average month, for though much drier than August and below the average in England, excessive rain prevailed in the north-east of Scotland; in fact in several of those counties it was by far the wettest month in the year.

OCTOBER.

Rainfall about the average, below it in the south-western counties of England, in Lincoln, the south-east of Scotland, and the south-east of Ireland; slightly above it in other parts.

NOVEMBER.

A rather dry month, the districts in which there was any excess being limited to the south-west of England and the north-east of Scotland, the latter being principally due to the heavy fall on the 6th.

DECEMBER.

Very dry month except in the extreme north of Scotland. Throughout England the fall was generally less than one-third of the average.

Summary.

Taken broadly it appears that—
January, July, and August were wet;
February, April, May, June, and December were dry;
March, September, October, and November were about the average.

MONTHLY RAINFALL IN 1873.

ENGLAND.

Division ..	I.	II.					III.			
County ..	Middlesex.	Surrey.	Kent.	Sussex.	Hants.	Berks.	Herts.	Bucks.	Oxford.	North-ampton.
Station ..	Camden Square	Guildford Gram. Sch.	Hythe.	Forest L. Maresfield.	Isle of W. S.Lawrence	Welford.	Bayford-bury.	Great Missenden.	Rad. Obser-vatory.	Welling-borough.
Ft. abv. Sea	111	187	12	247	75	335	250	...	208	...
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	2·44	+3·42	3·35	3·55	4·24	+4·73	+3·57	+5·07	2·20	2·01
Feb. ..	1·96	2·23	2·28	1·82	3·04	1·79	2·89	1·71	1·52	1·29
March..	1·46	2·26	2·27	2·20	2·35	2·88	1·94	2·75	2·34	1·43
April ...	·55	— ·41	1·50	— ·86	— ·72	·98	·77	1·29	— ·48	·79
May ..	1·56	1·34	2·09	1·51	·89	2·02	2·06	2·47	2·31	2·33
June ...	2·24	1·59	1·63	2·74	2·15	1·62	1·66	2·70	+2·78	+3·20
July ...	1·81	2·28	2·08	2·33	1·84	1·69	2·19	2·14	2·22	2·02
August.	2·87	2·75	3·39	3·76	1·57	4·01	2·14	2·42	2·62	2·32
Sept. ...	2·46	2·56	3·63	2·95	2·38	2·09	2·45	2·97	1·82	1·04
October.	+2·97	2·76	+4·17	+4·77	+5·03	2·38	2·89	3·07	2·69	2·08
Nov. ...	1·87	2·55	2·87	2·82	2·99	2·72	2·12	2·49	1·69	1·75
Dec. ...	— ·48	·46	—1·25	·96	·85	— ·54	— ·55	— ·78	·51	— ·51
Totals..	22·67	24·61	30·51	30·27	28·05	27·45	25·23	29·86	23·18	20·77

Division ..	III.			IV.			V.			
County. ..	Hunts.	Bedford.	Cambridge.	Essex.	Suffolk.	Norfolk.	Wilts.	Dorset.	Devon.	Cornwall.
Station ..	Wistow.	Bedford.	Wisbech.	Chelmsford	Yaxley.	Swaffham.	Alderbury.	Upway.	Bovey Tracey.	St. Austell.
Ft. abv. Sea	...	120	10	86	108	238	263	70	94	300
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	2·02	1·75	1·88	2·62	1·98	1·71	+4·94	+4·46	+9·57	+6·27
Feb. ...	·56	1·50	1·69	1·94	1·61	1·98	1·76	3·81	5·13	5·73
March..	1·08	1·25	1·56	·93	1·70	1·79	2·71	3·84	4·98	4·56
April ...	·69	1·45	1·07	·84	·69	1·45	·96	·67	·96	— ·80
May ...	2·32	1·70	2·84	·70	1·84	+2·45	1·10	1·20	1·45	2·64
June ...	2·79	+2·24	1·60	2·20	2·21	1·54	2·88	1·75	1·57	2·41
July ...	2·18	1·89	2·51	1·10	2·35	2·06	1·93	1·79	2·39	3·86
August.	+2·92	2·15	+4·02	2·65	·93	1·92	2·59	2·28	5·48	5·55
Sept....	1·94	1·82	1·87	2·16	+2·77	2·17	2·14	1·63	2·51	2·81
October	2·55	2·05	2·39	+3·03	2·55	2·43	2·48	3·22	2·26	3·30
Nov. ...	1·43	1·93	1·42	2·27	·93	1·31	3·48	4·20	4·68	4·40
Dec. ...	— ·17	— ·50	— ·54	— ·48	— ·50	— ·77	— ·65	— ·57	— ·91	1·13
Totals..	20·65	20·23	23·39	20·92	20·06	21·58	27·62	29·42	41·89	43·46

MONTHLY RAINFALL IN 1873—(*continued.*)

ENGLAND—(*continued.*)

Division ..	V.	VI.						VII.		
County ...	Somerset.	Glos'ter.	Hereford.	Salop.	Stafford.	Worcester.	Warwick.	Leicester.	Rutland.	Lincoln.
Station ..	Ilminster.	Nailsworth	Stretton.	Woolstaston.	Barlaston.	Hagley.	Leamington.	Loughboro'	Thistleton.	Miningsby
Ft. abv. Sea	133	160 ?	198	790	500	636	195	400 ?	...	162
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	+5·87	+4·69	+3·40	4·11	2·68	2·84	1·69	2·52	1·28	1·54
Feb. ...	2·07	1·51	1·32	·86	1·19	— ·59	·91	1·09	1·26	1·72
March..	3·71	4·12	2·95	3·42	3·06	2·98	2·22	2·43	1·64	1·72
April ...	·94	1·37	1·08	— ·72	·90	1·13	·67	·70	1·08	·79
May ...	1·16	3·39	1·63	2·78	2·27	3·04	2·41	2·52	2·36	2·20
June ...	1·31	1·31	2·66	2·44	2·30	+3·81	2·27	+4·10	2·56	1·07
July ...	3·25	3·39	2·76	3·26	3·32	3·01	2·58	2·04	2·06	2·41
August.	3·84	3·03	2·48	+4·32	2·94	3·23	+2·78	3·54	+3·40	+3·26
Sept. ...	2·38	2·31	1·49	2·10	2·35	1·63	1·75	1·62	1·57	2·16
October	1·78	3·00	1·60	3·14	+3·60	2·01	2·28	2·36	2·00	1·21
Nov. ...	3·99	2·16	1·80	2·53	2·26	1·70	1·18	2·46	2·46	1·23
Dec. ...	— ·45	— ·98	— ·81	·89	— ·72	·71	— ·64	— ·37	— ·43	— ·29
Totals..	30·75	31·26	23·98	30·57	27·59	26·68	21·38	25·75	22·10	19·60

Division ..	VII.		VIII.		IX.			X.		
County....	Notts.	Derby.	Cheshire.	Lancashire.	Yorks. W.R.	Yorks. E.R.	Yorks. N.R.	Durham.	Northumberland.	Cumberland.
Station ..	Mansfield.	Bamford.	Chelford.	Blackburn.	Leeds.	Warter.	Northallerton.	Ushaw.	Unthank Hall.	Mirehouse
Ft. abv. Sea	350	530	260	450	95	230	133	600	380	310
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	2·79	3·09	2·47	6·12	2·27	2·05	1·56	1·80	+6·34	+11·35
Feb. ...	1·22	2·04	— ·57	1·43	·82	1·52	1·03	1·61	— ·61	·86
March..	2·64	3·50	2·58	3·22	2·26	2·92	+2·69	2·38	1·86	3·11
April ...	·80	— ·72	·85	— ·57	·57	1·18	1·26	1·09	·68	— ·34
May ...	2·55	3·70	2·34	3·42	2·30	2·69	2·29	2·63	1·95	1·86
June ...	1·38	+5·76	2·15	2·28	·97	1·47	·98	2·14	1·40	2·05
July ...	2·40	2·79	3·72	4·68	+2·54	+3·15	2·44	2·26	1·81	6·18
August.	+3·23	4·04	+4·81	6·23	1·98	2·82	1·73	+3·03	4·61	5·62
Sept. ...	1·47	2·10	3·07	3·02	1·64	2·48	1·35	1·61	2·56	2·26
October	2·63	3·73	3·81	+7·18	1·87	2·27	1·98	1·96	4·02	5·95
Nov. ...	2·37	3·64	2·46	4·14	2·00	1·27	2·28	1·34	2·44	3·50
Dec. ...	— ·21	1·18	·82	1·81	— ·28	— ·52	— ·33	— ·37	1·89	3·22
Totals..	23·69	36·29	29·65	44·10	19·50	24·34	19·92	22·22	30·17	46·30

MONTHLY RAINFALL IN 1873—(*continued.*)

ENGLAND (*continued*). WALES.

Division ..	X.	XI.								
County....	Westmoreland.	Monmouth	Glamorgan	Carmarthen,	Pembroke.	Cardigan.	Brecon,	Radnor.	Montgomery.	Flint
Station....	Kendal.	Dingestow.	Pentyrch.	Asylum.	Tenby.	Goginan.	Watton.	Heyhope Rectory.	Carno,	St. Asaph
Ft. abv. sea	146	250	100	185	180	290	437	690	550	273
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	+9·44	+5·17	+6·63	+8·56	+7·51	4·80	+9·74	+6·53	6·20	2·31
Feb. ...	·65	1·78	1·86	2·45	3·01	—1·34	—1·38	1·43	+7·30	1·09
March..	3·30	2·64	4·78	3·44	4·27	3·33	3·26	4·36	4·00	2·04
April ...	— ·51	·70	— ·49	— ·90	— ·84	1·45	2·57	1·86	1·80	— ·81
May ...	2·53	1·99	3·10	3·18	3·12	3·05	1·72	2·35	3·20	1·41
June ...	2·69	3·11	2·73	2·06	1·70	1·64	2·11	2·47	—1·60	1·59
July ...	7·29	3·70	5·01	4·70	4·42	4·53	1·92	3·55	3·10	2·29
August.	5·90	3·19	5·33	7·65	6·03	5·46	3·68	3·40	4·00	2·54
Sept. ...	2·94	1·55	3·34	3·73	3·69	5·14	2·26	2·15	4·30	+3·81
Oct. ...	8·36	2·63	5·62	4·60	4·08	+6·52	2·75	3·75	4·70	2·68
Nov. ...	3·33	1·98	2·83	2·37	2·69	2·46	3·52	2·80	3·20	1·66
Dec. ...	2·43	— ·63	2·62	2·14	1·39	1·60	1·51	—1·17	4·20	·82
Totals..	49·37	29·07	44·34	45·78	42·75	41·32	36·42	35·82	47·60	23·05

WALES (*continued*). SCOTLAND.

Division ..	XI.			XII.				XIII.		
County....	Denbigh	Merioneth	Carnarvon	Wigton	Kirkcudbright	Dumfries	Roxburgh	Selkirk	Peebles	Berwick
Station....	Rosset	Dolgelly	Port Madoc	N. Balfern	Dalbeattie	Kirkpatrick	New Castleton	Galashiels	Glenrath	Dunse
Ft. abv. sea	58	43	10	75	60 ?	146	400	416	764	267
	in.	in.	in.	in.	in.	in.	in.	in	in.	in.
January	2·39	+ 11·70	+6·46	5·48	+7·60	+15·90	+ 12·70	+4·72	+7·08	2·60
Feb. ...	·89	2·34	1·39	·97	1·26	·82	·80	1·72	1·38	1·95
March..	+2·60	5·10	3·80	3·49	3·68	3·60	1·80	1·64	2·42	1·80
April ...	— ·87	— 1·92	—1·33	— ·51	— ·23	— ·04	— ·10	·82	— ·19	— ·58
May ...	2·17	2·82	3·19	1·90	2·45	2·10	2·10	2·15	2·16	2·52
June ...	1·32	2·35	1·44	1·59	1·79	2·40	1·50	— ·63	1·01	1·32
July ..	2·54	3·99	4·95	+5·79	5·82	9·20	5·70	4·17	4·32	3·25
August.	2·22	5·84	4·82	4·36	5·85	6·70	5·40	3·45	3·93	3·74
Sept. ...	2·27	4·37	3·16	3·32	4·27	5·50	4·60	2·96	3·28	2·92
Oct. ...	2·12	8·42	5·50	5·46	6·19	9·55	5·50	4·07	5·26	+3·90
Nov. ...	1·84	4·23	3·35	1·82	2·67	3·16	3·60	2·82	2·53	2·43
Dec. .	·97	2·12	1·81	1·65	2·05	4·80	3·40	1·53	2·53	·82
Totals..	22·20	55·20	41·20	36·34	43·86	63·77	47·20	30·68	36·09	27·83

MONTHLY RAINFALL IN 1873—*(continued.)*

SCOTLAND (*continued*).

Division ..	XIII.			XIV.			XV.			
County....	Haddington	Edinburgh	Linlithgow	Lanark	Ayr	Renfrew	Dumbarton	Stirling	Bute	Argyll (mainland)
Station....	East Linton	Edinburgh Princes-st.	Linlithgow	Baronald	New Cumnock	Newton Mearns	Arddarroch	Polmaise	Pladda	Airds
Ft. abv. sea	90	220	...	505	860	350	80	12	55 ?	15
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	1·44	2·16	4·10	4·83	+9·50	+9·26	+14·05	+7·50	7·53	7·40
Feb. ...	1·98	1·09	·95	1·00	·93	1·25	1·36	1·30	— ·29	— ·60
March..	1·72	1·67	2·10	2·64	4·20	3·14	3·57	2·00	1·90	2·70
April ...	— ·85	— ·24	— ·20	— ·19	— ·48	— ·30	— ·94	— ·30	·41	1·30
May ...	2·40	2·56	2·79	2·85	2·07	2·94	4·19	2·40	2·73	2·60
June ...	2·18	·95	1·27	·91	1·31	3·02	4·36	1·70	1·96	3·90
July ...	+5·43	2·93	3·75	4·87	4·43	5·49	8·69	4·70	3·68	7·20
August.	3·27	4·53	3·77	3·77	6·34	5·16	7·07	4·20	4·01	5·50
Sept. ...	2·46	3·83	4·09	4·04	6·05	5·03	5·77	4·10	3·39	5·00
Oct. ...	3·51	+4·75	+5·96	+5·76	7·39	8·01	11·48	5·50	+9·37	+7·60
Nov. ...	2·51	2·00	1·74	1·75	3·43	3·25	6·92	1·70	4·51	5·40
Dec. ...	1·17	1·53	1·85	2·03	4·15	4·90	8·06	3·10	2·12	6·30
Totals..	28·92	28·24	32·57	34·64	50·28	51·75	76·46	38·50	41·90	55·50

Division ..	XV.	XVI.					XVII.			
County....	Argyll (insular)	Clackmannan	Kinross	Fife	Perth	Forfar	Kincardine	Aberdeen	Banff	Elgin
Station....	Islay,		Loch Leven	Cupar	Callander	Kettins	Brechin	Braemar	Gordon Castle	Elgin
Ft. abv. sea	71	...	...	130	340	218	235	1114	70	50
	in.		in.	in.	in.	in.	in.	in.	in.	in.
January	6·13		4·30	3·35	+13·00	4·54	3·70	4·48	—1·25	—1·32
Feb. ...	·83		1·20	1·11	1·70	·92	1·10	·87	1·43	1·63
March..	2·28		1·90	1·78	2·30	1·89	2·30	— ·69	2·22	2·25
April ...	— ·75		— ·10	— ·16	— ·90	— ·21	— ·60	1·74	1·56	1·92
May ..	1·87		3·10	2·73	3·10	3·21	2·80	6·18	3·60	3·40
June ...	2·16		1·40	1·28	3·60	1·51	·90	2·83	1·73	2·17
July ...	4·96		+5·00	+4·39	8·70	+4·86	+5·60	4·21	3·06	4·45
August.	5·14		4·00	2·72	6·00	2·87	2·70	2·64	2 94	3·25
Sept. ...	4·98		3·60	3·71	4·40	3·20	5·00	+6·67	+4·83	+5·40
Oct. ...	+7·96		4·30	2·69	7·80	3·32	3·30	3·89	3·26	3·60
Nov. ..	3·24		3·10	1·99	4·00	1·28	3·30	4·82	4·17	3·92
Dec. ...	3·76		2·00	1·91	6·70	2·30	2·00	3·16	2·26	2·12
Totals..	44·06	...	34·00	27·82	62·20	30·11	33·30	42·18	32 31	35·43

No station in this county.

MONTHLY RAINFALL IN 1873—(*continued.*)

SCOTLAND (*continued*). IRELAND.

Division ..	XVII.	XVIII.				XIX.				XX.
County....	Nairn	W. Ross	E. Ross	Inverness (west)	Inverness (east)	Sutherland	Caithness	Orkney	Shetland	Cork
Station....	Nairn	Duncraig	Dingwall Academy	Loch Nevis	Farraline	Lairg	Wick	Balfour Castle	Bressay Manse	Fermoy.
. abv. sea	55	124	25	13	700	28	70	50	10	114
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	1·18	+8·79	2·64	+10·40	4·00	2·80	1·24	2·10	4·50	+7·47
Feb. ...	·93	1·11	— ·51	6·00	—1·00	—1·69	1·14	— ·10	1·90	2·24
March..	1·48	2·29	1·11	1·90	2·40	1·89	—1·07	1·90	3·70	3·83
April ..	— ·90	—1·99	·90	— 1·80	2·20	2·29	1·52	·80	1·50	1·80
May ..	1·56	2·46	3·53	3·40	2·20	3·26	1·42	1·10	4·00	1·21
June ..	1·36	3·72	1·91	5·60	2·20	2·86	1·19	1·20	—1·30	1·54
July ...	3·57	3·51	+4·01	5·00	4·00	5·20	2·33	2·00	3·80	2·96
August.	2·57	5·88	2·92	9·10	3·30	3·29	2·94	2·20	+6·00	3·85
Sept. ...	+5·61	5·41	3·71	8·50	4·00	4·62	2·66	2·80	2·40	2·22
October.	2·51	7·37	3·28	6·80	+5·00	5·91	+4·24	+6·20	4·70	3·04
Nov. ...	2·84	5·87	2·16	7·70	2·20	4·57	2·53	4·70	3·20	2·07
Dec. ...	2·66	7·55	3·50	7·50	4·40	+5·95	1·76	4·20	5·10	— ·87
Totals ..	27·17	55·95	30·18	73·70	36·90	44·33	24·04	29·30	42·10	33·10

IRELAND (*continued*).

Division ..	XX.			XXI.						
County. ..	Kerry	Tipperary	Clare	Wexford	Kilkenny	Carlow	King's County	Wicklow	Dublin	Westmeath
Station....	Darrynane Abbey	Clonmel	Killaloe	Courtown	Stoneyford	Carlow	Rathangan	Bray	Balbriggan	Athlone
Ft. abv. sea	12	80	123	80	220	291	224	250	57	201
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	+7·79	+7·84	7·72	+5·15	5·45	4·92	4·29	+4·37	3·76	+6·68
Feb. ...	4·49	2·22	—2·01	2·04	1·12	— ·88	— ·38	1·35	·78	1·07
March..	4·65	4·13	3·98	3·12	2·89	3·16	3·27	3·24	3·12	3·79
April ...	2·26	1·40	2·71	1·02	1·47	1·26	1·59	— ·53	— ·40	1·79
May ...	3·03	1·73	3·09	1·23	1·85	2·12	1·53	·84	1·51	2·10
June ...	2·99	1·84	2·91	1·70	1·17	1·10	1·56	1·04	·85	1·74
July ...	6·07	4·17	4·17	3·32	3·38	3·29	3·82	3·13	+4·18	5·25
August.	5·95	7·08	+8·61	4·00	+7·23	+6·33	+5·28	4·18	3·98	4·54
Sept. ...	6·59	2·61	5·26	2·06	3·03	2.28	1·99	2·46	2·74	3·89
Oct. ...	6·95	3·51	6·57	3·21	2·64	3·19	4·10	3·28	3·29	3·62
Nov. ...	4·41	3·12	3·19	2·09	1·77	1·55	2·09	2·77	1·82	1·94
Dec. ...	—1·86	—1·07	2·51	— ·56	— ·57	·93	1·04	·55	·66	—1·04
Totals ..	57·04	40·72	52·73	29·50	32·57	31·01	30·94	27·74	27·09	37·45

MONTHLY RAINFALL IN 1873—(*continued.*)

IRELAND (*continued*).

Division ..	XXII.			XXIII.						
County....	Galway	Roscommon	Sligo	Cavan	Armagh	Down	Antrim	Londonderry	Tyrone	Donegal
Station ..	Cregg Park	Holywell	Mount Shannon	Red Hills	Armagh Obs.	Seaford	Belfast	Londonderry	Omagh	Dunglow
Ft. abv. sea	130	...	70	208	206	180	68	80	275	10
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	+7·06	3·09	6·16	5·29	4·00	+4·59	3·58	5·20	4·69	6·00
Feb. ..	1·64	1·18	— ·79	— ·80	— ·34	1·62	·76	·86	·77	— ·83
March..	2·95	2·99	2·53	2·45	1·32	2·61	2·23	2·62	2·01	2·71
April ...	2·16	— ·99	1·43	1·41	·57	— ·28	— ·33	— ·75	— ·56	1·30
May ..	2·41	2·10	2·37	1·74	1·43	2·18	2·12	2·10	2·36	3·32
June ..	2·23	1·69	1·60	1·42	1·35	1·40	1·81	2·20	2·14	2·18
July ...	5·14	+5·00	3·82	3·73	+5·41	3·78	5·10	5·04	4·43	5·04
August.	5·40	2·99	7·02	+5·62	5·01	4·14	+5·63	+6·50	+6·15	7·02
Sept. ...	3·21	2·62	2·38	3·20	1·87	2·77	2·44	3·75	4·13	4·15
October.	5·32	4·90	+7·03	2·77	2·60	2·43	3·97	5·90	4·00	+7·48
Nov.. ..	1·94	1·20	2·29	2·05	2·09	3·28	2·55	2·40	2·09	3·85
Dec.....	—1·28	1·00	1·16	1·13	·69	·68	·61	2·75	1·55	3·33
Totals..	40·74	29·75	38·58	31·61	26·68	29·76	31·13	40·07	34·88	47·21

MONTHLY PER-CENTAGE OF RAIN IN 1873.

ENGLAND.

Month.	Middlesex.	Surrey.	Kent.	Sussex.	Hampshire.	Berks.	Herts.	Bucks.	Oxford.	Northampton.	Hunts.	Bedford.	Cambridge.	Essex.	Suffolk.	Norfolk.
Jan...	11	14	11	12	15	17	14	17	9	10	10	9	8	12	10	8
Feb...	9	9	8	6	11	6	12	6	7	6	3	7	7	9	8	9
Mar..	6	9	7	7	8	10	8	9	10	7	5	6	7	5	8	8
April.	2	2	5	3	3	4	3	4	2	4	3	7	5	4	3	7
May..	7	6	7	5	3	7	8	8	10	11	11	8	12	3	9	11
June.	10	7	5	9	8	6	7	9	12	16	14	11	7	11	11	7
July..	8	9	7	8	6	6	9	7	10	10	11	9	11	5	12	10
Aug..	13	11	11	12	6	15	8	8	11	11	14	11	17	13	5	9
Sept.	11	10	12	10	8	8	10	10	8	5	9	9	8	10	14	10
Oct...	13	11	14	16	18	9	11	10	12	10	12	10	10	15	13	11
Nov..	8	10	9	9	11	10	8	9	7	8	7	10	6	11	5	6
Dec..	2	2	4	3	3	2	2	3	2	2	1	3	2	2	2	4

ENGLAND—(*continued.*)

Month.	Wilts.	Dorset.	Devon.	Cornwall.	Somerset.	Gloucester.	Hereford.	Salop.	Stafford.	Worcester.	Warwick.	Leicester.	Rutland.	Lincoln.	Notts.	Derby.
Jan....	18	15	23	14	19	15	14	14	10	11	8	10	6	8	12	9
Feb....	6	13	12	13	7	5	6	3	4	2	4	4	6	9	5	5
Mar...	10	13	12	10	12	13	12	11	11	11	10	9	7	9	11	10
April.	4	2	2	2	3	4	4	2	3	4	3	3	5	4	3	2
May..	4	4	3	6	4	11	7	9	8	12	11	10	11	11	11	10
June..	10	6	4	6	4	4	11	8	8	14	11	16	12	6	6	16
July..	7	6	6	9	10	11	12	11	12	11	12	8	9	12	10	8
Aug...	9	8	13	13	12	10	10	14	11	12	13	14	15	17	14	11
Sept..	8	6	6	6	8	7	6	7	9	6	8	6	7	11	6	6
Oct...	9	11	6	8	6	10	7	10	13	8	11	9	9	6	11	10
Nov..	13	14	11	10	13	7	8	8	8	6	6	10	11	6	10	10
Dec...	2	2	2	3	2	3	3	3	3	3	3	1	2	1	1	3

MONTHLY PER-CENTAGE OF RAIN IN 1873.

ENGLAND—(*continued.*) WALES.

Month.	Cheshire.	Lancashire.	Yorks, W.R.	Yorks, E.R.	Yorks, N.R.	Durham.	Northumberland	Cumberland.	Westmoreland.	Monmouth.	Glamorgan.	Carmarthen.	Pembroke.	Cardigan.	Brecon.	Radnor.
Jan...	8	14	12	9	8	8	21	24	19	18	15	19	18	12	27	18
Feb...	2	3	4	6	5	7	2	2	1	6	4	5	7	3	4	4
Mar..	9	7	12	12	14	11	6	7	7	9	11	8	10	8	9	12
April	3	1	3	5	6	5	2	1	1	2	1	2	2	4	7	5
May..	8	8	12	11	11	12	7	4	5	7	7	7	7	7	5	7
June.	7	5	5	6	5	9	5	4	5	11	6	4	4	4	6	7
July..	13	11	13	13	12	10	6	13	15	13	11	10	10	11	5	10
Aug..	16	14	10	12	9	14	15	12	12	11	12	17	14	13	10	9
Sept..	10	7	9	10	7	7	9	5	6	5	8	8	9	12	6	6
Oct...	13	16	9	9	10	9	13	13	17	9	13	10	10	16	8	11
Nov..	8	10	10	5	11	6	8	8	7	7	6	5	6	6	9	8
Dec..	3	4	1	2	2	2	6	7	5	2	6	5	3	4	4	3

WALES—(*continued.*) SCOTLAND.

Month.	Montgomery.	Flint.	Denbigh.	Merioneth.	Carnarvon.	Wigton.	Kirkcudbright.	Dumfries.	Roxburgh.	Selkirk.	Peebles.	Berwick.	Haddington.	Edinburgh.	Linlithgow.	Lanark.
Jan...	13	10	11	21	16	15	17	25	27	15	20	9	5	8	13	14
Feb...	15	5	4	4	3	3	3	1	2	6	4	7	7	4	3	3
Mar..	8	9	12	9	9	10	8	6	4	5	7	7	6	6	6	8
April	4	4	4	4	3	1	1	0	0	3	0	2	3	1	1	0
May..	7	6	10	5	8	5	6	3	4	7	6	9	8	9	8	8
June.	3	7	6	4	4	4	4	4	3	2	3	5	8	3	4	3
July..	7	10	11	7	12	16	13	14	12	14	12	12	19	10	11	14
Aug..	8	11	10	11	12	12	13	10	11	11	11	13	11	16	12	11
Sept.	9	16	10	8	8	9	10	9	10	10	9	10	8	14	13	12
Oct...	10	12	10	15	13	15	14	15	12	13	14	14	12	17	18	16
Nov..	7	7	8	8	8	5	6	5	8	9	7	9	9	7	5	5
Dec...	9	3	4	4	4	5	5	8	7	5	7	3	4	5	6	6

MONTHLY PER-CENTAGE OF RAIN IN 1873.

SCOTLAND—(*continued.*

Month.	Ayr.	Renfrew.	Dumbarton.	Stirling.	Bute.	Argyll (Mainland).	Argyll (Insular).	Clackmannan.	Kinross.	Fife.	Perth.	Forfar.	Kincardine.	Aberdeen.	Banff.	Elgin.
Jan...	19	18	18	20	18	13	14	No station in this county.	13	12	21	15	11	11	4	4
Feb...	2	2	2	3	1	1	2		3	4	3	3	3	2	4	5
Mar..	8	6	5	5	4	5	5		6	6	4	6	7	2	7	6
April	1	1	1	1	1	2	2		0	1	1	1	2	4	5	5
May..	4	6	5	6	7	5	4		9	10	5	11	8	15	11	10
June.	2	6	6	5	5	7	5		4	4	6	5	3	7	5	6
July..	9	11	11	12	9	13	11		15	16	14	16	17	10	10	13
Aug..	13	10	9	11	9	10	12		12	10	10	9	8	6	9	9
Sept..	12	10	8	11	8	9	11		10	13	7	11	15	16	15	15
Oct...	15	15	15	14	22	14	18		13	10	12	11	10	9	10	10
Nov..	7	6	9	4	11	10	7		9	7	6	4	10	11	13	11
Dec..	8	9	11	8	5	11	9		6	7	11	8	6	7	7	6

SCOTLAND—(*continued.*)

Month.	Nairn.	Ross, W.	Ross, E.	Inverness, W.	Inverness, E.	Sutherland.	Caithness.	Orkney.	Shetland.
Jan...	4	16	9	14	11	6	5	7	11
Feb...	3	2	2	8	3	4	5	0	4
Mar..	5	4	4	3	6	4	5	6	9
April.	3	4	3	2	6	5	6	3	4
May..	6	4	12	5	6	7	6	4	9
June..	5	7	6	8	6	7	5	4	3
July..	13	6	13	7	11	12	10	7	9
Aug..	10	10	10	12	9	8	12	8	14
Sept..	21	10	12	12	11	11	11	10	6
Oct...	9	13	11	9	13	13	18	21	11
Nov..	11	11	7	10	6	10	10	16	8
Dec...	10	13	11	10	12	13	7	14	12

IRELAND.

Month.	Cork.	Kerry.	Tipperary.	Clare.	Wexford.	Kilkenny.
Jan...	22	14	19	15	17	17
Feb...	7	8	6	4	7	3
Mar..	12	8	10	7	11	9
April.	5	4	3	5	3	5
May..	4	5	4	6	4	6
June..	5	5	5	5	6	4
July..	9	11	10	8	11	10
Aug..	12	10	17	16	14	22
Sept..	7	12	6	11	7	9
Oct...	9	12	9	12	11	8
Nov..	6	8	8	6	7	5
Dec...	2	3	3	5	2	2

MONTHLY PER-CENTAGE OF RAIN IN 1873.

IRELAND—(*continued.*)

Month.	Carlow.	King's Co.	Wicklow	Dublin.	Westmeath.	Galway.	Roscommon,	Sligo.	Cavan.	Armagh.	Down.	Antrim.	Londonderry	Tyrone.	Donegal.
Jan...	16	14	16	14	18	17	10	16	17	15	15	12	13	13	13
Feb...	3	1	5	3	3	4	4	2	2	1	6	2	2	2	2
Mar..	10	11	11	11	10	7	10	7	8	5	9	7	7	6	5
April	4	5	2	1	5	5	3	4	4	2	1	1	2	2	3
May..	7	5	3	6	5	6	7	6	5	5	7	7	5	7	7
June.	4	5	4	3	5	6	6	4	5	5	5	6	5	6	4
July.	11	12	11	16	14	13	17	10	12	20	13	16	13	13	11
Aug..	20	17	15	15	12	13	10	18	18	19	14	18	16	18	15
Sept.	7	7	9	10	10	8	9	6	10	7	9	8	9	12	9
Oct...	10	13	12	12	10	13	17	18	9	10	8	13	15	11	16
Nov..	5	7	10	7	5	5	4	6	6	8	11	8	6	6	8
Dec..	3	3	2	2	3	3	3	3	4	3	2	2	7	4	7

ABSTRACT.

Month.	Mean per-centage in each month.					Highest per-centage, and Counties in which it occurred.	Lowest per centage, and Counties in which it occurred.
	Engl'nd	Wales.	Scotl'nd	Ireland.	British Isles.		
January.	13	16	13	15	14·3	27 Brecknock and Roxburgh	4 Banff, Elgin, Nairn.
February	6	5	3	4	4·5	15 Montgomery	0 Orkney.
March ...	9	9	6	9	8·3	14 York, N.R.	2 Aberdeen.
April ...	3	4	2	3	3·0	7 Beds, Norfolk, Brecon	0 Dumfries, Roxburgh, Peebles, Lanark, Kinross.
May.....	8	7	7	5	6·7	15 Aberdeen	3 Hants, Essex, Devon, Dumfries, Wicklow.
June.....	8	6	5	5	6·0	16 Northampton, Leicester, Derby	2 Selkirk, Ayr
July.....	10	10	14	12	11·5	20 Armagh	5 Essex, Brecon.
August...	12	12	10	16	12·5	22 Kilkenny	5 Suffolk.
Sept.....	8	9	11	9	9·2	21 Nairn	5 Northampton, Cumberland, Monmouth.
Oct.	11	11	13	12	11·8	22 Bute	6 Devon, Somerset, Lincoln.
Nov.....	9	7	8	7	7·7	16 Orkney	4 Stirling, Forfar, Roscommon.
Dec.....	3	4	8	3	4·5	14 Orkney	1 Hunts, Leicester, Lincoln, Notts, York W.R.

EXTREMES OF RAINFALL IN 1873.

ENGLAND.

Greatest.			Least.		
Div.		in.	Div.		in.
X.	Seathwaite	146·53	X.	Middlesboro' (Southfield Villas)	15·86
,,	Grasmere (Easedale Tarn) ...	104·00	IX.	Barnsley (M. S. & L. R.).....	15·90
,,	Kirkstone Pass	103·10	III.	Chatteris	16·67
,,	Little Langdale, Bridgend ...	100·20	VI.	Shrewsbury	16·70
,,	Wythburn	96·00	IX.	Thorganby (Thicket Priory)..	16·73
,,	Patterdale (Greenside)	91·91	VII.	Stockwith	16·79

WALES.

Greatest.			Least.		
Div.		in.	Div.		in.
XI.	Beddgelert (Bryn Gwynant)..	107·94	XI.	Holywell (Maes-y-dre).....	20·12
,,	Rhiwbrifdir	97·89	,,	Rosset (Trevalyn Hall)..... ..	22·20
,,	Treherbert (Aberdare)	84·59	,,	St. Asaph (Nantllys).....	23·05
,,	Garthbibio Lluest fawr.....	65·10	,,	Llandudno (Gt. Orme's Hd.).	23·52
,,	Dolgelly (Brithdir)	62·79	,,	Llanystumdwy (Talarvor) ...	23·55
,,	Ystalyfera	61·13	,,	Mold (Bryn Alyn).....	24·90

SCOTLAND.

Greatest.			Least.		
Div.		in.	Div.		in.
XV.	Bridge of Orchy	128·50	XIII.	Milne Graden	20·60
XVIII.	Glenquoich	118·28	,,	Kelso (Springwood Park).....	22·25
,,	Loch Sheil (Glenfinnan)	112·17	XVIII.	S. Uist Manse	23·70
,,	Isle of Skye (Oronsay).....	100·36	XIX.	Wick (Pulteney House)	24·04
XVI.	Glen Gyle	95·60	XVI.	Montrose.....	24·68
XV.	Loch Lomond (Firkin).....	93·50	XIII.	Dalkeith	24·88

IRELAND.

Greatest.			Least.		
Div.		in.	Div.		in.
XX.	Cara (Glenbehy)	57·82	XXI.	Monkstown (Easton Lodge)..	23·01
,,	Darrynane Abbey	57·04	,,	Dublin (Fitzwilliam Square)..	23·82
,,	Killaloe	52·73	,,	Glasnevin (Botanic Gardens).	24·63
,,	Cara (Lake Side)	48·34	,,	Dublin (Eccles St.)	26·13
XXII.	Galway (Queen's College) ...	48·08	,,	Clonee (Williamstown)	26·35
XXIII.	Dunglow (Templecrone)	47·21	,,	Balbriggan.....	26·49

ON THE RAINFALL OF THE BRITISH ISLES DURING THE YEAR 1873.

THE tables on the following two pages show, as the broad general result, that the rainfall of 1873 was within about five per cent. of the average of the six years 1860-65, the close approximation of which average to that of a long series of years has already been proved in former volumes of this work.

Representing by 100 the average over the whole country during the six years 1860-65, the following have been the ratios of each subsequent year :—

1866	106	1870	82
1867	98	1871	97
1868	108	1872	136
1869	101	1873	95

These numbers show that not only have there been four years above and four below the average, but as their mean is 103, it is evident that even the tremendous excess of 1872 has only affected the eight years average to the extent of 3 per cent.

Before proceeding to comment briefly upon the details of the distribution as indicated by the comparison table, we desire to interpose a few words respecting the duties of any one called upon to compile such a table. These are conflicting; on the one hand it may be urged that he ought to insert as many stations as possible, and that a suppression of returns simply because they appear discordant is equally unwise, presumptuous, and reprehensible. But on the other hand it is evidently undesirable that misleading records should be printed, and that the mean results from trustworthy stations should be mingled with, and often impaired by, those of careless or inaccurate observers. Our actual practice has been the intermediate one of never rejecting any record extending over the requisite 24 years, without very strong

reasons for so doing. We have some indication of there having been an alteration in the gauge, or its position, at Althorp during the last eight or ten years, whereby the recorded amounts have been largely increased, and the same has occurred at Exeter Institution, probably through the beheading of the holly tree in 1863. On the other hand, there are a few of the Scottish Lighthouse stations which report extremely small amounts, but our readers are aware that they must always be accepted with caution.

Although these values may perhaps affect the average either of England or Scotland by one or even two per cent., their effect cannot be regarded as serious, and we hope will shortly be annihilated; they are already in such a minority, and so surrounded by accurate stations, that their temporary presence does not affect the following remarks:—

The average deficiency for England and Wales was about 7 per cent., the greatest deficiency is between Buxton and Manchester, but especially between Lincolnshire and South-West Yorks. In the South Midland Counties the fall was near the average.

In Wales, as far as present information goes, the fall appears to have been exceptionally small, about 20 per cent. deficiency.

In Scotland, as usual, the returns are much more irregular, but on the whole the deficiency is less than in England. Most of the stations along the Clyde and near thereto had an excess, but there was a deficiency at Insular and Lighthouse stations on the south-west coasts, and also at various stations between Berwick and the banks of the Tay.

In Ireland the relation of the fall to the average cannot be accurately determined, owing to the scarcity of old-established stations, but it appears to have been also slightly below it in that country.

COMPARISON OF THE RAINFALL IN 1873 WITH THE AVERAGE OF PREVIOUS YEARS.

ENGLAND AND WALES.

Div.	STATION.	COUNTY.	Average			Depth in 1873.	Difference from Average, 1860-5	
			1850-9.	1860-9.	1860-5.		Amount.	Per cent
			in.	in.	in.	in.	in.	
I.	Camden Town	Middlesex ...	(24·30)	25·68	25·01	22·67	2·34 —	9
II.	Chichester Infirmary	Sussex	26·67	29·03	29·01	24·41	4·60 —	16
,,	,, (Shopwyke)...	,, ...	26·25	29·19	28·41	26·55	1·86 —	7
,,	,, (Chilgrove) ...	,, ...	32·23	33·22	32·77	31·17	1·60 —	5
,,	,, (W. Dean) ...	,, ...	35·30	37·08	37·02	33·02	4·00 —	11
,,	Uckfield Observatory ...	,, ...	30·03	31·24	31·50	30·06	1·44 —	5
,,	Ventnor, Isle of Wight...	Hants	28·46	(29·07)	29·26	28·00	1·26 —	4
III.	Hemelhempstead	Herts	26·43	26·39	25·47	23·99	1·48 —	6
,,	Berkhempstead	,, ...	28·05	29·28	28·02	27·78	0·24 —	1
,,	Hitchin	,, ...	24·72	23·92	23·25	21·87	1·38 —	6
,,	High Wycombe	Bucks	23·20	25·71	24·29	23·52	0·77 —	3
,,	Althorp	Northants ...	20·34	23·35	21·77	24·66	2·89 +	13
,,	Cardington (8 in. gauge)..	Bedford	21·60	22·49	21·87	21·37	0·50 —	2
IV.	Witham	Essex	20·55	20·47	20·73	20·18	0·55 —	3
,,	Norwich (Honingham) ...	Norfolk	25·99	23·98	23·28	22·28	1·00 —	4
,,	Holkham	,, ...	26·13	23·88	23·10	21·42	1·68 —	7
V.	Plymouth (Ham)	Devon	44·70	42·89	42·17	40·17	2·00 —	5
,,	Tavistock, West Street...	,, ...	49·18	53·17	52·32	50·40	1·92 —	4
,,	Exeter Institution.....	,, ...	26·91	31·76	30·17	33·72	3·55 +	12
,,	Honiton (Broadhembury)	,, ...	32·75	34·56	34·28	31·05	3·23 —	9
,,	Helston	Cornwall	36·22	37·87	38·05	39·01	0·96 +	3
,,	Bodmin	,, ...	43·48	47·71	46·12	47·66	1·54 +	3
VI.	Burford	Shropshire ...	25·52	26·74	26·25	25·01	1·24 —	5
,,	Shiffnal (Haughton Hall)	,, ...	24·02	24·87	23·74	24·76	1·02 +	4
,,	Orleton	Worcester ...	28·82	30·90	30·06	25·58	4·48 —	15
VII.	Wigston	Leicester	26·39	25·17	26·49	23·01	3·48 —	13
,,	Spalding, (Pode Hole) ...	Lincoln	23·38	25·34	25·11	19·63	5·48 —	22
,,	Welbeck	Notts	23·29	24·64	24·02	22·41	1·61 —	7
,,	Derby	Derby	23·98	26·81	25·14	21·18	3·96 —	16
VIII.	Bolton (The Folds).....	Lancashire ...	44·01	48·98	48·33	42·69	5·64 —	12
,,	,, (Belmont)	,, ...	51·19	54·61	55·70	52·60	3·10 —	6
,,	Ormskirk (Rufford)	,, ...	33·24	35·00	34·81	30·31	4·50 —	13
,,	Holker.....	,, ...	39·17	45·63	44·98	40·66	4·32 —	10
IX.	Redmires...	York, W.R...	37·86	39·68	37·89	31·92	5·97 —	16
,,	Standedge	,, ...	49·58	53·70	52·17	42·50	9·67 —	19
,,	Halifax (Well Head).....	,, ...	30·71	33·31	31·09	25·56	5·53 —	18
,,	Leeds (Holbeck, M. & Co.)	,, ..	20·91	22·85	21·98	17·50	4·48 —	20
,,	York	,, ...	22·02	24·48	23·38	18·80	4·58 —	20
X.	Seathwaite	Cumberland..	126·98	154·05	153·47	146·53	6·94 —	5
,,	Keswick (Post Office) ...	,,	55·01	62·40	60·56	54·99	5·57 —	9
XI.	Holywell (Maes-y-dre) ...	Flint	24·25	24·43	23·58	20·12	3·46 —	15
,,	Guernsey.....	Channel Isds.	34·46	37·18	37·09	37·72	0·63 +	2

COMPARISON OF THE RAINFALL IN 1873 WITH THE AVERAGE OF PREVIOUS YEARS.

SCOTLAND.

Div.	STATION.	COUNTY.	Average 1850-9.	Average 1860-9.	Average 1860-65.	Depth in 1873.	Difference from Average, 1860-5 Amount.	Per cent
			in.	in.	in.	in.	in.	
XII.	Mull of Galloway	Wigtown	22·52	27·66	28·31	16·56	11·75 —	41
,,	Little Ross	Kirk'udbright	25·27	26·98	27·35	23·83	3·52 —	13
XIII.	Haddington	Haddington. .	24·35	25·63	26·93	26·28	0·65 —	2
,,	Glencorse	Edinburgh	36·96	37·45	36·77	36·50	0·27 —	1
,,	Inveresk	,,	24·72	29·02	30·05	28·08	1·97 —	6
XIV.	Bothwell Castle	Lanark	27·76	28·89	28·33	32·34	4·01 +	14
,,	Cessnock Park	,,	34·01	37·96	37·98	38·34	0·36 +	1
,,	Largs (Mansfield)	Ayr	43·06	48·92	48·63	44·60	4·03 —	8
,,	Waulk Glen	Renfrew	43·94	49·85	48·96	51·40	2·44 +	5
XV.	Arddaroch	Dumbarton. .	66·55	78·32	75·83	76·46	0·63 +	1
,,	Pladda	Bute	35·23	40·14	38·12	41·90	3·78 +	10
,,	Mull of Cantyre	Argyll	41·19	44·17	44·61	38·43	6·18 —	14
,,	Rhinns of Islay	,,	30·58	33·43	32·66	36·18	3·52 +	11
,,	Castle Toward	,,	47·88	54·55	53·80	49·65	4·15 —	8
,,	Tyree (Hynish)	,,	73·90	79·99	84·77	63·27	21·50 —	25
,,	Lismore	,,	38·44	46·22	46·95	41·21	5·74 —	12
,,	Ardnamurchan	,,	38·50	45·59	47·94	47·34	0·60 —	1
XVI.	Isle of May	Fife	15·21	20·48	21·08	23·45	2·37 +	11
,,	Deanston	Perth	39·21	43·99	42·35	43·35	1·00 +	2
,,	Dundee (Hill Head)	Forfar	31·06	35·19	35·59	34·90	0·69 —	2
,,	,, (Craigton)	,,	31·87	34·88	35·64	35·57	0·07 —	0
,,	Arbroath	,,	25·08	29·05	29·71	28·95	0·76 —	3
XVII.	Girdleness [Aberdeen]	Kincardine	19·71	22·72	22·13	23·35	1·22 +	5
,,	Buchanness	Aberdeen	23·40	25·59	22·51	23·98	1·47 +	7
XVIII	Cromarty	Cromarty	23·67	25·94	27·80	23·61	4·19 —	15
,,	Barrahead	Inverness W.	32·67	31·73	32·62	27·83	4·79 —	15
,,	Culloden	Inverness, E.	22·70	27·08	26·86	28·38	1·52 +	6
XIX	Cape Wrath	Sutherland	36·94	39·37	39·59	41·72	2·13 +	5
,,	Noss Head	Caithness	25·57	24·70	23·57	28·47	4·90 +	21
,,	Pentland Skerries	,,	24·12	28·76	28·92	25·50	3·42 —	12
,,	Sandwick	Orkney	36·14	38·85	36·79	37·73	0·94 +	3
,,	Bressay Manse	Shetland	36·22	40·31	40·40	42·10	1·70 +	4

IRELAND.

XX.	Cork	Cork	34·23	34·77	34·41	32·70	1·71 —	5
,,	Killaloe	Clare	38·33	47·65	46·70	52·73	6·03 +	13
XXI.	Portarlington	King'sCounty	26·94	36·86	41·38	29·50	11·88 —	29
,,	Tullamore	,, ,,	24·37	27·94	28·09	33·12	5·03 +	18
,,	Woodstock	Kilkenny	36·35	39·38	38·83	40·28	1·45 +	4
,,	Black Rock	Dublin	21·78	27·10	25·83	24·96	0·87 —	3
XXIII	Armagh	Armagh	(28·20)	32·01	32·40	26·68	5·72 —	18

ABSTRACT.

England	33·29	35·78	35·09	32·58	2·51 —	7
Scotland	33·70	37·61	37·61	36·29	1·32 —	4
Ireland	30·03	35·10	35·38	34·28	1·10 —	3
Mean of the whole	32·34	36·16	36·03	34·38	1·65 —	5

REMARKS SUGGESTED BY AN EXAMINATION OF THE GENERAL TABLES, AND BY COMPARISONS OF THE TOTAL RAINFALL IN 1872 AND 1873.

One of the checks to which every one of the 1700 returns is subjected is the determination of the difference between the total fall in the year under notice, and that at the same station in the previous year, and the comparison of the whole of these values by plotting them upon suitable maps. No one who has not actually tried this process would credit the variations which prevail, or the degree of precision which acquaintance with the physical features of the country, coupled with knowledge of the general laws of rainfall distribution, enables one to apply to this comparison. Of course these values are disturbed by many causes, especially by thunderstorm rains; but as this is one of the last processes in the order of time to which the records are submitted, one is previously aware of the districts in which anomalous results are to be expected.

DIVISION I.

The deficient rainfall in the south of *Middlesex*, to which we referred last year, is again proved by a fall in the neighbourhood of Teddington of little more than 21 inches, and on the northern hills of about 25 inches. The decrease from 1872 may be taken as 9 inches.

DIVISION II.

In *Surrey* the highest amounts differ from the lowest by about 10 inches, the former being principally found along the hills from Guildford to Dorking, and the latter in the extreme north of the county, near its junction with Middlesex. The decrease from 1872 follows

nearly the same general distribution, is greatest near Hind Head in the south of the county, where it amounts to 19 inches, and least in the neighbourhood of Kew, where it is only 6 inches. In *Kent* the fall was heaviest along the range of hills from Sevenoaks to Dover, especially at the former place, and near Hythe, and as usual least in the Isle of Thanet. The decrease was greatest at Dover (19 in.) and least (7 in.) near London. In *Sussex* we have unfortunately lost the important station of Bepton Hill, and Crowborough Beacon Observatory claims for 1873 not only to be the highest (777 ft.) but also the wettest station in the county (35·52 in.), while Worthing (23·17) and Bognor (24·06) are the driest. The decrease is very uniform throughout the county, but is greatest (19 inches) at Steyning; its average is about 14 inches. The *Hampshire* returns present several anomalies. The amounts vary from 32 inches at Newport, Isle of Wight, to 21 inches in the extreme north near Reading; but the differences are very capriciously distributed. They are much greater in the neighbourhood of Alton and Petersfield than elsewhere, and at the latter station reach 23 inches, shading off gradually in almost all directions to about 11 inches on each margin of the county. *Berks.* The fall in this county was very uniform, ranging but 2 in. on either side of 23 in., and the difference is also pretty generally 12 in.

DIVISION III.

In *Hertfordshire* the rainfall varied but little from 25 in., and the decrease from 9 in., except at Watford, where, owing to the excessive fall in 1872, the deficiency is 17 inches. In *Buckinghamshire* the amount was least in the north, and in the south, of the county, and considerably greater in the middle, near Aylesbury; decrease 8 inches and uniform. In *Oxfordshire*, with one exception, the amounts are very uniform. We are, however, rather doubtful respecting that from the new station at Charlbury, the record appears to have been correctly kept, but the largeness of the total induces regret that the gauge has not yet been tested. The decrease is variable, near Thame it is almost as little as in any other part of England, viz., 6 in., but it gradually increases with distance therefrom, and is 12 inches in the N., S., and W. of the county. *Northamptonshire.* Fall about 23 in., decrease about 12 inches, and both very uniform. The return from Althorp is about 2 inches above that of any neighbouring station. Unless there is something in the position unknown to us, we fear

that this gauge is not properly divided. *Hunts.* Rainfall 21 in., decrease 10 in., and both very uniform. *Bedfordshire.* Rainfall 21 in., decrease 9 in., both uniform, except the decrease at Silsoe, which is only 5 in., because of the small fall at that station in 1872. *Cambridgeshire.* Rainfall uniform, about 22 in.; decrease variable, about 8 in. in the south, but 16 in. in the neighbourhood of Wisbeach.

DIVISION IV,

In *Essex* the rainfall was between 20 and 25 inches, the decrease on the average about 10 inches, but variable; small near London, near Harlow, and Dunmow, and large (15 and 16 in.) on the coast, in this respect agreeing with what prevailed at Dover and in Thanet. *Suffolk.* Amount of rainfall between 17 and 25 inches, except at two stations at Bury St. Edmunds, where the gauges are of an unusual construction, and rather higher amounts are reported. Decrease about 10 in., except along the coast, where we have a continuance of the high values previously mentioned. *Norfolk.* Rainfall varying between 18 and 25 inches, the latter occurring principally on the high ground near Swaffham. Decrease about 12 inches, but more in the extreme east, and also in the neighbourhood of Swaffham owing to the very large amounts which fell in that part in 1872.

DIVISION V.

The rainfall in *Wilts* varied from 23 to 30 inches; decrease about 14 inches, except on the borders of Dorset and Somerset where it was two or three inches more. *Dorset.* Rainfall between 26 and 33 inches, the latter prevailing inland. The decrease very irregular, being about 15 inches on the coast, and 14 inches at Shaftesbury, but much more in the neighbourhood of Blandford, and nearly 28 in. at Melbury, where the amounts are: 1872, 60·23; 1873, 32·29; decrease 27·94. The return for 1872 was unprecedentedly large. The great county of *Devon* embraces districts of such different physical character that no one will be surprised that the rainfall varied from 28 inches at Sidmouth to upwards of 60 inches on Dartmoor. With so much greater variation in the amount of rainfall, the method of comparing the fall of 1872 and 1873 by their difference in inches, becomes rather troublesome, and that of per-centages preferable, but we retain the former, because by many of our readers it is more easily understood, and those who wish to use per-centages can easily work them out. Speaking

broadly, we think that the decrease may be said to have been about 15 inches at ordinary and low level stations, and from 20 to 40 inches at the high and wet stations on and around Dartmoor. *Cornwall* has a more equable rainfall than Devon for two reasons: the larger proportion of coast line, and the absence of so large a mountain mass as Dartmoor. It is much to be wished that a station or stations should be established near "Brown Willy," for the Altarnum record of 59·92 in. (and 84·11 in 1872) shows that its influence is very considerable. No part of Cornwall has a small rainfall, the least records are always from the neighbourhood of Port Isaac, and it was so in 1873, for the minimum (31·54) was at Treglines, the maximum was the above-mentioned 59·92 at Altarnum. These two stations, by the bye, are only 15 miles apart. The rainfall of *Somerset* always appears to us to vary more in different parts of the county than would have been expected, and it was so in 1873, for while there are several records of only 24 in., there are several exceeding 35 in., and one of 39 in. The decrease varied from 12 in. in the neighbourhood of Taunton to 23 in. on the south-east border of the county, near Dorset.

DIVISION VI.

Gloucester. Rainfall about 25 in., ranging from 22 at Gloucester to 32 at Bristol; decrease about 16 in. *Hereford* had a very similar rainfall to Gloucester, but a rather greater decrease, especially at the highest station in the county, Leysters, near Leominster (altitude about 700 ft.), where the fall in 1872 was 54·03, and in 1873 only 26·82, being a decrease of 27 in. or 51 per cent., and in fact 0·20 in. less than half. *Shropshire.* Rainfall much the same as in the two previous counties, but decrease greater, averaging 23 inches, and being more than 50 per cent. at several stations, *e.g.*, Stokesay 50 per cent., Shrewsbury 51, Whitchurch 51, the decrease in this case being 28 inches. The rainfall in *Stafford* varies considerably; near Burton it was only 22 inches, but in the north of the county between 30 and 40 inches. The decrease was less than in Shropshire, averaging 20 inches, but at Penkridge and Etruria reached 24 in. and 28 in. respectively, being in each case a decrease of 50 per cent. *Worcester.* The rainfall varied from 20 in. at Evesham to 30 in. at Worcester; the decrease was only about 14 in. *Warwick.* Rainfall only varying from 21 to 24 inches, and decrease also regular, and about 16 inches.

DIVISION VII.

Leicester. Rainfall between 20 and 27 in.; decrease about 14 in. *Rutland.* Rainfall about 22 in.; decrease 15 in. *Lincoln.* Rainfall between 17 and 25 in.; decrease about 14 in., but irregular, being only from 5 to 10 inches on the N.E. coast, and about 15 in the west of the county. We regret to have been obliged to suppress the return from Gainsborough, but a fall of only 13·00, and a decrease more than twice that of any surrounding station, coupled with other evidence, renders such a course imperative. In *Nottingham* the fall, and decrease, are both regular, the former is about 22 in., the latter about 17 in. In *Derbyshire*, on the contrary, the hills produce great variations, in the east the fall was only from 18 to 21 in., while in the hill districts it exceeded 40 in. The decrease varied from 11 in. in the south-east to 40 in. near Buxton, and at some of these higher stations nearly reached 50 per cent.

DIVISION VIII.

In *Cheshire* we have more proof of the difference in the rainfall of 1872 and 1873 than in any county yet mentioned. The amount varied from about 22 in. in the peninsula of Wirral to 40 in. on the eastern hills. The decrease was, however, very uniform, viz., about 24 in., and therefore in the following instances reached or exceeded 50 per cent.: Pulford 56, Bosley Minns 50, Chester 53, Hinderton 52, Marple Top Lock 51. In *Lancashire*, as in other hilly counties, the rainfall varies greatly, at several stations in the south and on the coast it was less than 30 in., while at the hill stations it was about 45 in., and in the Coniston district upwards of 70 in. The decrease was at most stations about 17 in., and the per-centage not nearly so remarkable as in Cheshire.

DIVISION IX.

In the *West Riding of Yorkshire* we have the variations usual to a county partly flat and partly hilly, and the amounts vary from scarcely 16 in. in the south to upwards of 50 in. in the north western hills. The decrease throughout the Riding is large, with a few exceptions uniform, and averages about 24 inches. We, therefore, have a state of things to which we remember no parallel in English rainfall. It

has often been asserted that the annual rainfall varies as 1 to 2, that is, that the fall in the wettest year will be just twice that in the driest, of a long series.

We do not know of more than a very few instances of such extremes occurring in consecutive years, and the few cases we have already quoted for other divisions are probably as numerous and remarkable as could be collected from all the trustworthy records of the present century. The following table gives, however, not only a far greater number of instances than were ever collected before, but, so far as we know, several of them are of unequalled intensity.

Stations in Yorkshire at which the rainfall in 1873 *was less than half that of* 1872.

Station.	1872.	1873.	Decrease per cent.	Station.	1872.	1873.	Decrease per cent.
Handsworth Grange	37·60	17·65	53	Holbeck	35·90	17·50	51
Broomhall Park	45·81	22·40	51	Bootham	39·97	18·80	53
Crookes	43·00	21·41	50	Cherry Hill	40·38	19·87	51
Tinsley Locks	45·91	21·54	53	Littlethorpe	42·68	20·52	52
Moorgate Grove	39·26	17·63	55	Ripon	42·07	19·63	53
Wath-upon-Dearne	40·16	16·92	58	Thicket Priory	34·05	16·73	51
West Melton	39·53	16·84	57	Malton	41·79	20·71	50
Elsecar	41·07	18·79	54	Filey	46·81	21·07	55
Doncaster	42·29	19·39	54	Bedale	44·22	19·29	56
Magdalens	38·39	18·18	53	Leyburn	49·66	21·53	57
Worsborough	56·86	22·33	61	Northallerton	40·53	19·92	51
Dunford B. Station.	85·74	42·44	51	Tunstall	42·10	19·05	55
Penistone	54·42	25·78	53	Grosmont	57·18	18·88	67
Barnsley	42·28	15·90	62	Whitby N. Li. Ho.	39·95	17·04	57
,, (Church St.)	45·54	18·45	60	,, Guisboro' Rd.	38·62	19·07	51
Ackworth	41·07	19·07	53	Greta Bridge	44·75	20·80	54
Mirfield	37·45	18·65	50	Grey Towers	41·82	17·18	59
Rastrick	43·44	19·31	56	Marton Hall	40·64	19·20	53
Bradford M. Inst.	43·12	19·96	54	Upleatham	36·25	17·30	52
Chellow Dean	51·52	24·75	52	Middlesboro'	34·70	15·86	54

DIVISION X.

Durham is a county with very uniform rainfall, the amounts ranging from 20 to 25 in., but the decrease was both large and variable, being greater in the south and west than elsewhere. At five stations it was less than half that of 1873, but the diminution was in no case so remarkable as in Yorkshire. The presence of the Cheviots causes the rainfall of *Northumberland* to vary much in different parts; in the neighourhood of N. Shields it was only about 19 in., while at Dead-

water it exceeded 60 in. The decrease also varied considerably, and in the south was very great, being nearly 30 in., the diminution at Wylam Hall was 57 per cent. *Cumberland* is well known to have a great variety in the amount of rainfall, and 1873 was no exception, while on the coast it ranged from 20 to 30 in., it reached 147 at Seathwaite (7 in. above the average), and was, doubtless, about 180 at the Stye, whence, however, no record has reached us. The decrease was not large, and in no case even approached 50 per cent. *Westmoreland* has a dry corner close to Penrith, and many wet spots; the extremes in 1873 were 28 in. at Brougham Hall, and 104 in. at Easdale Tarn, above Grasmere. The decrease was large, nearly 30 in., and was both absolutely and relatively greater than in Cumberland.

DIVISION XI.

In *Wales* we find extreme differences of rainfall. In the north-east, where the air has been dried by passing over the Snowdon range, it is very small, in 1873 very little more than 20 in., while among the hills in the south, the centre, and the north, it reached 60 or 80 in., and close to Snowdon was 98 in. at one station, 108 at another, and (calculating from an incomplete record) 130 in. at Pen-y-gwryd. The decrease between the fall in 1872 and that in 1873 was considerable at all stations, averaging 30 in., and as it was nearly as great at dry stations as at wet ones, the per-centage of decrease at some of the former was considerable, and though not so striking as in Yorkshire, the decrease in Flint and Denbigh was very remarkable, most so at Bryn Alyn, where the fall in 1872 was 56·81, in 1873 only 24·90, being 56 per cent. less, or 3·51 in. less than half that in the former year.

DIVISION XII.

Extending, as this *Southern Division* does, almost across Scotland, and including stations at altitudes ranging from 60 to 1,330 ft., a considerable range of rainfall is to be expected, and the extremes in 1873 (omitting Lighthouses) of 22 in. at Kelso, and 72 in. at Wanlockhead on the Leadhills, are within the limits of variation which might have been anticipated. The difference between the fall in 1872 and in 1873 was less than on the English side of the Border, and rarely reached 20 in.

DIVISION XIII.

The rainfall in the *South East* of Scotland is rarely so great as one would have expected from the altitude of many of the stations; the reason obviously being that the clouds are previously partly drained by the Dumfriesshire Hills. The least fall in 1873 was near the driest station (Kelso) in Division XII., viz. Milne Graden, in Berwickshire, with less than 21 in., and the greatest, 51 in. at Cairnmuir, on the Pentlands, 1,150 ft. above sea. The fall in 1873 was about 15 in. less than that in 1872.

DIVISION XIV.

We are not aware that any dry spots exist in the *South Western counties*, at any rate the lowest return was 32 in. at Hamilton, and the highest nearly 70 in. at the Shaws Water Works, near Greenock. Less rain fell at every station in 1873 than in 1872, but at several the difference was less than 10 in., and it only averaged 13 in.

DIVISION XV.

In the *West Midland counties* we have, in some respects, a similar tract of country and quantity of rainfall to that in the south-western counties, but owing to the greater height of the hills, and, perhaps, to the more intricate character of the valleys, we have much wetter stations than in Division XIV. Owing to the peculiar shape of the county of Stirling, a few eastern stations are improperly included in this Division. Of true western stations those at the mouth of the Clyde and on some of the flatter islands, have the least rain, and in 1873 report about 42 in., while at the mountain stations it varies from 80 to 130 in. *Argyleshire* is one of the five counties in which alone even at a single station the fall in 1873 exceeded that in 1872. On the average of the whole of the stations, the fall in 1873 was quite 10 in. less than in 1872, but there are a few at which the two years agree closely, and at the following the excess has been in 1873:—

	1872.	1873.	Excess.
Inverary ...	71·50 ...	72·00 ...	0·50
Fladda ...	65·15 ...	69·30 ...	4·15
Calgary ...	70·20 ...	77·00 ...	6·80

DIVISION XVI.

In the *East Midland* counties, as in most other parts of Scotland, a very different fall of rain occurs in some parts from that which falls

in others; near Perth, for example, the fall in 1873 was 25 in., and a few miles away to the south-west (at Glengyle) it was nearly 100 in. Nearly 20 in. less rain (on the average) fell in 1872 than in 1873, except in Fife and Forfar, where the decrease was not so great.

DIVISION XVII.

The returns from the *North-Eastern* counties present some features of resemblance to those of the south-eastern, especially in the lessened effect of altitude, *e.g.*, we have Braemar, 1,114 ft., only 42·68; Tillypronie, 1,120 ft. only 32·20; and Tomintoul, in Banffshire, almost identical in elevation (1,100 ft.), and rainfall (only 32·38.) Nairn was the driest in 1873 (27 in.), and Braemar (43 in.), the wettest. At all stations less rain fell in 1873 than in 1872, but in Moray the difference was very slight.

DIVISION XVIII.

The Registrar-General of Scotland having classed Inverness, Ross, and Cromarty as *North-Western* counties, we are bound to follow suit, but we do so under protest, and have endeavoured to lessen the anomaly by dividing both Ross and Inverness into Eastern and Western portions. The rainfall of this division varies very considerably; on the shores of the Moray Firth it was, in 1873, about 28 in. (Culloden House, 28·38, Invergordon Castle, 28·43), while at Glen Quoich (not the wettest district) it reached 118 in. At the stations at the head of Lochbroom the fall in 1873 has largely exceeded that in 1872; the excess at Loch Vraon and consecutive stations being 16, 14, 17, and 23 in. respectively. In a few other cases there were trifling excesses, but over the whole division the two years agree closely.

DIVISION XIX.

In the *Northern* counties we reach and include the *Ultima Thule*, and come upon a tract of country of which but for lighthouse records, and two or three good observers (like Dr. Clouston) we should know but little. The rainfall varies slightly compared with other parts of Scotland, and is by no means excessive, though more frequent than in more southern localities. In 1873 it was about 8 in. less than in 1872.

DIVISION XX.

Munster is worse represented than any part of the British Isles; we can, therefore, only state that the returns with which we have been favoured vary from 33 in. to 58 in., and are all about 20 in. below those of 1872.

DIVISION XXI.

There is, perhaps, greater variety in the amount of rainfall in *Leinster* than in either of the other provinces, it being very nearly twice as great in Kilkenny (44) as in Dublin (23). It is worthy of note that while as a general rule there was 17 in. less rain in 1872 than in 1873, in King's County the decrease at no station exceeded 9 in., and averaged less than 7 in.

DIVISION XXII.

We have unfortunately not enough stations in *Connaught* to furnish a trustworthy basis for remarks.

DIVISION XXIII.

It is not easy to understand why the rainfall in eastern *Ulster* is so much greater than in Leinster; the fact, however, remains that the driest station in the former had 4 in. more than the driest in Leinster, while the wettest, Templecrone in Donegal, only had 47 in., against 57 in. at Darrynane, and 58 in. at Glenbehy, in Kerry. Compared with 1872, the decrease has been about 13 in., but less on the west coast, and considerably more on the east.

EPITOME OF RAIN RETURNS FROM THE LAKE DISTRICT.

It has been suggested that the fact of the Coniston District being in the county of Lancashire, and therefore the returns from that neighbourhood several pages removed from those for Cumberland and Westmoreland, is not conducive to the facile comparison of the records. We have therefore prepared the following table, which very roughly approximates to a map of the district. The three columns represent three belts, each 10 miles wide, running S.W.-N.E. from Barrow to Penrith; the cross lines represent distances of 10 miles N.E. from Barrow. Therefore each block is a square of 100 miles, and the records are arranged from the bottom of the page north-eastward to the top.

Blencowe ..... 38·28	Edenhall..... 26·32 Penrith..... 29·09 Brougham Hall ..... 27·86 Great Strickland.... 31·48	Appleby..... ..... 29·03 Reagill ..... 35·00 Crosby Ravensworth 40·54
Skiddaw .... 46·38 Mire House..... . 46·30	Watermillock..... 48·20 Swarthfell ..... 42·50 Sharrow Bay..... 40·21 Hallsteads... ..... 48·80 Gowbarrow..... 58·25 Measandbecks..... 50·25 Martindale..... 69·61 Mardale Green..... 86·75 Patterdale .... 82·12 Greenside..... .. 91·91	
Keswick, Brow Top. 55·55 ,, Shu-le-Crow... 53·70 ,, Post Office..... 54·99 ,, Derwent Isle.. 48·51 ,, Deer Close..... 55·72 ,, Barrow House. 68·91 Watendlath..... .. 82·25 Seathwaite.....146·53	Kirkstone Pass.....103·10 Wythburn..... 96·00 Lesketh Howe..... 85·00 Easedale Tarn.....104·00 High Close..... 80·42 Brathay Vicarage.. 77·34 Elterwater .. .. 91·37 Little Langdale.....100·20 Wray .... 68·49 Hawkshead..... 71·03	Stavely..... ..... 56·01 Kendal Underfell. .. 48·81 ,, Highgate.... 48·99 ,, Hawesmead.. 47·89 ,, Kent Terr. ... 49·37 Windermre, the Wood 61·37 Belsfield ..... 56·81 Matson's Grounds ... 59·63 Crosthwaite..... 51·33
Braystones ..... 36·62	Coniston Parsonage. 87·33 Monk Coniston..... 69·00 ,, Lanehead..... 75·96 Woodland Parsonage 48·37 Broughton Vicarage 52·16	Broughton Hall..... 48·21 Grange..... .. .. 45·52 Cartmel..... 43·10 Holker..... ..... 40·66 Allithwaite ..... 36·57 Flookburgh..... 37·46 Powka Beck..... 44·94 Ulverstone ..... 46·13
The Sea.	Bootle..... ..... 38·54 Whitbeck..... 38·59	Barrow..... 30·14

GENERAL TABLES

OF

TOTAL RAINFALL IN 1873,

AT ABOUT

1700 STATIONS

IN THE

BRITISH ISLES.

SUGGESTIONS

FOR SECURING UNIFORMITY OF PRACTICE AMONG RAINFALL OBSERVERS.

N.B. New Rules are printed in this type.

I.—SITE.—A rain gauge should not be set on a slope or terrace, but on a level piece of ground, at a distance from shrubs, trees, walls, and buildings—at the very least, as many feet from their base as they are in height. Tall-growing flowers, vegetables, and bushes must be kept away from the gauge. If a thoroughly clear site cannot be obtained, shelter is most endurable from N.W., N., and E., less so from S., S.E., and W., and not at all from S.W. or N.E.

II.—OLD GAUGES.—Old established gauges should not be moved, nor their registration discontinued until, at least, two years after a new one has been in operation, otherwise the continuity of the register will be irreparably destroyed. Both the old and the new ones must be registered at the same time and the results recorded for comparison.

III.—LEVEL.—The funnel of a rain gauge must be set quite level, and so firmly fixed, that it will remain so in spite of any gale of wind or ordinary circumstance. Its correctness in this respect should be tested from time to time.

IV.—HEIGHT.—The funnel of gauges newly placed should be 1 ft. above grass. Information respecting height above sea level may be obtained from the Editor.

V.—RUST.—If the funnel of a japanned gauge becomes so oxidised as to retain the rain in its pores, or threatens to become rusty, it should have a coat of gas tar, or japan black, or a fresh funnel of zinc or copper should be provided.

VI.—FLOAT GAUGES.—If the measuring rod is detached from the float, it should never be left in the gauge. If it is attached to the float, it should be pegged or tied down, and only allowed to rise to its proper position at the time of reading. To allow for the weight

of the float and rod, these gauges are generally so constructed as to show 0 only when a small amount of water is left in them. Care must always be taken to set the rod to the zero or 0.

VII.—Can and Bottle Gauges.—The measuring glass should always be held upright; the reading is to be taken midway between the two apparent surfaces of the water.

VIII.—Time of Reading.—Nine a.m. daily; if taken only monthly, then 9 a.m. on 1st.

IX.—Date of Entry.—The amount measured at 9 a.m. on any day is to be set against the previous one; because the amount registered at 9 a.m. of, say, 17th contains the fall during 15 hours of the 16th, and only 9 hours of the 17th. *(This rule has been approved by the Meteorological Societies of England and Scotland, cannot be altered, and is particularly commended to the notice of observers.)*

X.—Mode of Entry.—If less than one-tenth (·10) has fallen, the cypher must *always* be prefixed; thus, if the measure is full up to the seventh line, it must be entered as ·07, that is, no inches, no tenths, and seven hundredths. For the sake of clearness, it has been found necessary to lay down an invariable rule that there shall always be two figures to the right of the decimal point. If there be only one figure, as in the case of one-tenth of an inch (usually written ·1) a cypher must be added, making it ·10. Neglect of this rule causes much inconvenience. All columns should be cast *twice*—once up and once down, so as to avoid the same error being made twice. When there is no rain, a line should be drawn rather than cyphers inserted.

XI.—Caution.—The amount should always be written down before the water is thrown away.

XII.—Small Quantities.—The unit of measurement being ·01, observers whose gauges are sufficiently delicate to show less than that, are, if the amount is under ·005, to throw it away, if it is ·005 to ·010 inclusive, they are to enter it as ·01.

XII.—Absence.—Every observer should train some one as an assistant; but where this is not possible, instructions should be given that the gauge should be emptied at 9 a.m. on the 1st of the month, and the water bottled, labelled, and tightly corked, to await the observer's return.

XIV.—Heavy Rains.—When very heavy rains occur, it is desirable to measure immediately on their termination, and it will be found a safe plan after measuring to return the water to the gauge, so

that the morning registration will not be interfered with. Of course if there is the slightest doubt as to the gauge holding all that falls, it must be emptied, the amount being *previously* written down.

XV.—Snow.—In snow three methods may be adopted—it is well to try them all. (1) Melt what is caught in the funnel by adding to the snow a previously ascertained quantity of warm water, and then deducting this quantity from the total measurement, enter the residue as rain. (2) Select a place where the snow has not drifted, invert the funnel, and turning it round, lift and melt what is enclosed. (3) Measure with a rule the average depth of snow, and take one twelfth as the equivalent of water. Some observers use in snowy weather a cylinder of the same diameter as the rain gauge, and of considerable depth. If the wind is at all rough, all the snow is blown out of a flat-funnelled rain gauge.

XVI.—Overflow.—It would seem needless to caution observers on this head, but as a recent foreign table contains *six instances on one day* in which gauges were allowed to run over, it is evidently necessary that British observers should be on the alert. **It is not desirable to purchase any new gauge of which the capacity is less than four inches.**

XVII. Second Gauges.—It is often desirable that observers should have two gauges, and that one of them should be capable of holding eight inches of rain. One of the gauges should be registered daily, the other weekly or monthly as preferred, but always on the 1st of each month. By this means a thorough check is kept on accidental errors in the entries, which is not the case if *both* are read daily.

XVIII.—Dew and Fog.—**Small amounts of water are at times deposited in rain gauges by fog and dew, they should be added to the amount of rainfall, because (1) they "tend to water the earth and nourish the streams; and not for that reason only, but (2) because in many cases the rain gauges can only be visited monthly, and it would then obviously be impossible to separate the yield of snow, rain, &c.; therefore, for the sake of uniformity, all must be taken together."**

ARRANGEMENT OF GENERAL TABLES.

The divisions are the same as those adopted by the Registrars General of England and Scotland.

The boundaries of these divisions are shown on the map facing page 147 of *British Rainfall*, 1872.

The counties follow the same order as in the reports of the beforementioned officers.

An alphabetical list of the counties is given, with the page or pages on which all returns from each will be found.

The stations in each county are arranged in the order of their latitude from South to North.

In order to facilitate finding the fall in any part of the country, the first name is almost always that of a place given in *Bradshaw*, the *British Postal Guide*, or the *Clergy List;* the second name is added occasionally to fix accurately the site of Observation. In a very few instances, this second name is in [ ] instead of ( ); it then shows that the nearest town is in an adjoining county. For instance, "Lowestoft (Gisleham)" means Gisleham, near Lowestoft, both being in one county, but "Geldeston [Beccles]" means Geldeston, Norfolk, near Beccles, in another county—Suffolk.

The contents of the columns are sufficiently explained by the headings, except that in the column headed "diameter" figures will occasionally be noticed of a different type from the rest of the tables; these figures indicate the length of the sides of rectangular mouthed gauges. These measurements are all in inches.

The letter D denotes that a copy of the daily record has been received, that it is perfect throughout the year, and that the printed amount is the correct total of these daily entries.

An asterisk * denotes that the gauge was tested before erection, and a † that it has been visited and examined since. A note of interrogation (?) implies doubt, not necessarily error. ... indicates the absence of information.

BA is employed to indicate gauges originally provided out of the funds of the British Association.

In the column of altitudes several symbols are used, their meaning is as follows:—T, that a series of levels have been taken from the gauge to an Ordnance bench mark; t, that the height is estimated or ascertained approximately from the same source; L, that levels have been taken from the gauge to the sea, or to some datum other than Ordnance mean sea level; B, that the altitude has been taken by the barometer; and ?, that the height is uncertain.

COUNTY INDEX TO GENERAL TABLES.

ENGLAND.

Bedford 158
Berks 156
Buckingham 157
Cambridge 159
Cheshire 171
Cornwall 164
Cumberland 177
Derby 170
Devon 162
Dorset 162
Durham 176
Essex 159
Gloucester 166
Hampshire 155
Hereford 166
Hertford 157
Huntingdon 158
Kent 153
Lancashire 171
Leicester 168
Lincoln 169
Middlesex 152
Monmouth 179
Norfolk 160
Northampton 158
Northumberland 176
Nottingham 170
Oxford 157
Rutland 169
Shropshire 167
Somerset 165
Stafford 167
Suffolk 160
Surrey 153
Sussex 154
Warwick 168
Westmoreland 178
Wiltshire 162
Worcester 168
Yorkshire 173

WALES.

Anglesea 181
Brecknock 180
Cardigan 180
Carmarthen 180
Carnarvon 181
Denbigh 180
Flint 180
Glamorgan 179
Merioneth 181
Montgomery 180
Pembroke 180
Radnor 180

ISLANDS.

Isles of Scilly ....
Alderney ....
Guernsey 181
Jersey 181
Isle of Man 181
Sark 181

SCOTLAND.

Aberdeen 188
Argyll 186
Ayr 184
Banff 189
Berwick 183
Bute 185
Caithness 191
Clackmannan ....
Cromarty 189
Dumbarton 185
Dumfries 182
Edinburgh 183
Elgin (or Moray) ... 189
Fife 186
Forfar 188
Haddington 183
Inverness 190
Kincardine 188
Kinross 186
Kirdcudbright 182
Lanark 184
Linlithgow 184
Nairn 189
Orkney 191
Peebles 183
Perth 187
Renfrew 185
Ross 189
Roxburgh 182
Selkirk 183
Shetland 191
Stirling 185
Sutherland 191
Wigtown 182

IRELAND.

Antrim 194
Armagh 194
Carlow 193
Cavan 194
Clare 192
Cork 192
Donegal 194
Down 194
Dublin 193
Eastmeath 193
Fermanagh 194
Galway 193
Kerry 192
Kildare ....
Kilkenny 192
King's County 193
Leitrim ....
Limerick ....
Londonderry 194
Longford ....
Louth 193
Mayo 193
Monaghan ....
Queen's County ....
Roscommon 193
Sligo 193
Tipperary 192
Tyrone 194
Waterford 192
Westmeath 193
Wexford 192
Wicklow 193

ENGLAND AND WALES.

DIVISION I.—MIDDLESEX.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
MIDDLESEX.						
Hampton Wick (The Grove) ...	T. J. Nelson, Esq.....	5	1 1	27 ⅄	23·39	145
„ (Fairlight)	C. Mostyn, Esq.....	8	1 0	30?	21·27	...
Teddington (Gomer House)	R. D. Blackmore, Esq...	5	0 10	26 ⅄	21·77	164
Hanworth (Riversdale).....	G. Anderson, Esq.	5	1 0	66	18·51	...
D Chiswick (Roy. Hort. Soc.).....	Prf. W. Thistleton Dyer	...	0 9	25	22·97	155
D Westminster (Spring Grdns), S.W.	J W Bazalgette, Esq. C.E	8	6 0	35 ⅄	21·03	110
„ „ „	„ „ „ ...	12	65 11	95 ⅄	20·09	110
„ „ „	„ „ „ ...	8	66 4	95 ⅄	19·21	110
London (Guildhall), E.C.	W. Haywood, Esq. C.E	8	2 6	49	22·82	150
„ „	„ „ „	8	51 0	98	22·00	150
D „ (Mile End), E.	Late F. Charrington Esq	5	13 6	46 T	20·51	140
„ (Regent's Park R. Bot. Soc)	W. Sowerby, Esq.....	8	1 0	126 ⅄	24·08	160
„ (Rochester Square) N.W.	J. Nickolls, Esq.	5	1 0	100 T	23·01	...
D † „ (Camden Square), N.W..	G. J. Symons, Esq. ...	8	0 6	111 ⅄	22·67	160
D Islington (St. Mary's Road), N..	W. T. Reynolds, Esq...	5	1 0	117 ⅄	21·70	156
D „ (Compton Terrace).....	Dr. Ballard	8	0 6	122 ⅄	22·09	160
*Upper Clapton (Hadham Ho.) ...	J. Parnell, Esq.	5	1 1	98 ⅄	21·25	161
†Hampstead (Squire's Mount).....	Rogers Field, Esq. C.E.	5	1 0	388 ⅄	23·52	157
*Kentish Town Reservoir Bank...	G. J. Symons, Esq. ..	5	0 10	200 T	22·07	...
D † Highgate Nurseries.....	J. Cutbush, Esq.	5	1 0	394 T	23·84	126
D Harrow (Northwick House)	H. St. J. Joyner, Esq.	5	0 6	200 ⅄	23·97	160
D Stamford Hill	N. F. Robarts, Esq. ...	5	0 11	110 T	21·29	...
D † Tottenham (Grove Ho.)	Charles Ashford, Esq..	5	1 0	55 T	22·76	162
D Muswell Hill	J. W. Scott, Esq.	5	0 9	310 T	24·70	172
D Pinner Hill	W. A. Tooke, Esq. ...	5	3 6	410	24·06	181
D Uxbridge (Harefield Park)	W. F. Vernon, Esq. ...	8	0 8	290 ⅄	24·04	159
D Enfield (Nag's Head Lane)	W. C. Mylne, Esq. ...	...	3 0	89	26·38	171
D † Winchmore Hill	T. Paulin, Esq.	8	1 0	350?	25·32	165
„ „	„ „ „	5	1 0	350?	25·46	165
„ „	„ „ „	5	5 6	350?	24·82	164

DIVISION II.—SOUTH-EASTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
SURREY.						
Godalming (Dunsfold)	Mr. W. Underwood	5	2 6	166	23·89	...
Weycombe [Haslemere]	G.B.Buckton,Esq.FRS	5	4 0	583 ⅄	30·59	...
D Dorking (Holmwood)	A. Sconce, Esq.	5	1 2	320 T	29·20	113
D Farnham (Culverlands)	Miss Gibson	5	1 1	300 B	23·60	197
Chilworth (Postford House)	J. Pares, Esq.	5	1 6	200 ⅄	26·51	...
Redhill (Earlswood)	G. Grabham, Esq., M.D.	5	1 2	...	27·24	...
D Albury	Rev. F. C. Clutterbuck	5	1 0	205 T	26·47	171
D † Guildford (Roy. Grammar Sch.)	Rev. Dr. Merriman	5	1 6	187 ⅄	24·61	155
„ (Guildown)	Miss J. Y. Hadden	5	0 11	220 T	22·27	141
Dorking (Horsham Road)	Miss Wilkinson	5	0 10	200	31·12	160
D „ (West Street)	Mrs. W. A. Marsh	10	35 0	234 T	29·22	145
„ (Brookmead)	T. L. M. Winter, Esq.	4	1 0	180 ⅄	26·83	...
„ (The Denbies) (*Foot*)	G. Cubitt, Esq., M.P.	...	...	...	28·24	...
„ „ (*Top*)	„ „ „	5	1 0	610 T	31·01	...
Redhill (Oxford Road)	W. H. Tyndall, Esq.	...	...	300	29·99	...
Nutfield Priory	J. Fielden, Esq., M.P.	8	1 2	...	27·21	158
D Chobham (Northbourne)	Dr. Ward	8	1 2	93 ⅄	20·55	155
† Weybridge Heath	W. F. Harrison, Esq.	8	0 6	150 ⅄	21·64	...
D Croydon (Church Road)	Dr. Westall	5	1 6	152 ⅄	25·71	144
D „ (Tanfield Lodge)	J. Weston, Esq.	5	0 8	155 ⅄	26·15	...
D „ (Dingwall Road)	J. Rickett, Esq.	5	5 3	180 ⅄	26·88	156
„ (Waldronhurst)	C. W. Johnson, Esq.	8	35 0	237 ⅄	22·94	93
D „ (Waddon House)	P. Crowley, Esq.	8	1 6	...	26·12	139
D „ (Addiscombe)	Edward Mawley, Esq.	8	0 9	202 ⅄	25·09	154
D Surbiton (Ewell Road)	G. Dines, Esq.	5	1 0	94	23·11	181
Beulah Hill (Norbury)	S. R. Scott. Esq.	5	0 10	320	24·02	...
D Wimbledon	T. Devas, Esq.	12	3 0	160	21·19	149
Balham	B. Haughton, Esq., C.E.	5	1 0	...	23·05	131
Richmond (Halford House)	J. Billett, Junr., Esq.	5	0 9	50 ⅄	21·43	...
D Kew Observatory	The Kew Committee	11	1 3	19 ⅄	20·81	149
Kennington Road	A. H. Thorns, Esq.	8	5 0	19 ⅄	21·76	133
Battersea (St. John's College)	Rev. J. P. Faunthorpe	8	0 0	13	24·27	136
KENT.						
D Tenterden	J. Ellis Mace, Jr., Esq.	8	1 5	190 ⅄	25·51	159
Benenden (East End)	„ „ „	8	1 9	193 ⅄	24·97	...
D † Hythe	H. B. Mackeson, Esq.	8	0 6	12 T	30·51	196
Folkestone (Priory Leas)	R. B. Johnstone, Esq.	5	4 3	100 ?	23·93	...
D † Dover (Russell Street)	H. J. Poulter, Esq.	5	1 6	30 ?	27·08	136
D Acrise	G. C. Woollett, Esq.	8	0 6	484 ⅄	30·09	186
† Cranbrook (Hartley)	G. Pile, Jun. Esq.	5	4 0	407	27·06	188
D Goudhurst Vicarage	Rev. J. S. Clarke	5	1 1	412 T	23·92	165
Hythe (Lyminge)	R. Appach, Esq.	8	1 2	350	28·04	166
D Ashford (Buxford Ho.)	J. S. Burra, Esq.	8	1 0	126 ⅄	25·30	145
D „	T. Thurston, Esq.	...	6 0	176	26·99	...
D Tunbridge (St. Stephens)	W. C. Punnett, Esq.	5	2 0	98 ⅄	26·05	136
Staplehurst	Mr. W. Wilson	...	...	...	25·62	164
Edenbridge (Falconhurst Court)	J. G. Talbot, Esq., M.P.	5	1 0	400 L	28·18	164

DIVISION II.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
					feet.	inches.	
KENT—(*con*).							
D†Maidstone (Linton Park)	Mr. J. Robson	8	0	6	296 ⅄	23·99	169
† „ (East Sutton Park)	Mr. T. Skinner	8	0	6	387 T	23·51	79
D† „ (Hunton Court)	Mr.P. Goddard	8	0	6	80 T	22·10	137
Lenham	Rev. C. Parkin	5	2	0	400	25·07	133
Charing (Otterden)	Rev. W. A. Paxton	5	1	0	507 ⅄	27·15	...
D Canterbury (Bridge Street)	Mr. J. Reid	5	1	0	52 T	25·74	182
†Faversham (Brogdale)	W. C. Stunt, Esq.	5	4	0	140 T	21·16	137
†Sandwich (Walton House Eastry)	Colonel Rae	5	1	0	53 T	22·55	...
Seven Oaks (River Hill)	J. T. Rogers, Esq.	8	3	6	535 ⅄	25·71	141
D „ (Riverhead Vic.)	Rev. J. B. Murdoch	5	0	6	...	30·23	161
D East Malling (Clare House)	J. M. Clabon, Esq.	...	3	4	130	20·46	138
†Selling (Harefield)	E. Neame, Esq.	5	2	6	217 T	25·55	175
†Sheldwich	Rev. B. S. Malden	5	1	0	259 T	24·37	131
D Stourmouth	Rev. R. Drake	5	1	0	12 ?	20·92	99
D[illegible]†Margate (Acol)	E. S. Lendon, Esq.	5	0	8	60 T	16·89	114
D „ (Cecil Square)	W.Lane Sear,Esq.C.E.	5	6	6	37 ⅄	17·29	130
Sittingbourne	G. Payne, Junr., Esq.	5	1	1	38	21·33	...
D† Bromley Common, S.E.	Rev. A. Rawson	8	1	0	250 T	27·97	169
†Chislehurst (Heathfield Lodge)	Mr. Alves	8	1	0	295 T	26·06	...
†Foot's Cray (Sidcup)	Miss Berens	5	0	8	231 T	22·79	...
D† Beckenham (Parkside)	C. O. F. Cator, Esq.	8	0	3	139 ⅄	25·39	161
† „ „ *monthly*	„ „	5	0	4	139 ⅄	24·61	...
† „ „	„ „	5	50	0	200 ⅄	19·36	145
D† „ (Foxgrove)	Percy Bicknell, Esq.	5	0	5	141 ⅄	24·83	157
† „ „	„ „	5	4	0	145 ⅄	23·83	154
D Forest Hill (Church Road)	Edwin E. Glyde, Esq.	5	1	0	152 T	24·16	179
D† Dartford (The Downs)	R. F. Jarvis, Esq.	5	2	0	162 ⅄	21·46	118
D† Eltham Green (Garden)	E. J. C. Smith, Esq.	5	1	0	80 T	24·71	147
D Lee (Blessington Road)	J. Grant, Esq., C.E.	10	4	9	49 ⅄	27·26	165
Greenwich (Royal Observatory)	J.Glaisher,Esq.,F.R.S.	8	0	5	155 T	23·36	...
D Deptford (Pumping Station)	W. Jeffree, Esq.	10	3	8	18 ⅄	27·91	151
Erith (Crossness)	F. E. Houghton, Esq.	11	0	6	16 ⅄	24·20	133
„ „	„ „ „	11	0	6	24 ⅄	24·96	133
„ „	„ „ „	10	0	6	6	23·72	133
WEST SUSSEX.							
†Bognor (Aldwick)	H. Upton, Esq.	5	1	0	50 T	24·06	...
D† Worthing (Bedford Row)	W. J. Harris, Esq.	8	0	6	17 ⅄	23·17	157
„ (Water Works)	„ „ „	5	0	11	25 ⅄	23·39	...
D† Arundel (Yapton)	R. Redford, Esq.	5	1	0	23 ⅄	26·75	168
†Chichester (Infirmary=Museum)	W. Hills, Esq.	5	0	6	50 T	24·41	...
† „ (Westgate)	Dr. Tyacke	5	0	6	40 ⅄	25·45	...
† „ (Shopwyke)	Rev. G. H. Woods	8	1	2	61 T	26·55	...
†Arundel (Dale Park)	J. C. Fletcher, Esq.	11	3	5	316 ⅄	30·88	...
D† Steyning	Col. Ingram	5	1	0	80 T	31·95	146
†Chichester (West Dean)	H. Paxton, Esq.	8	1	6	209 ⅄	33·02	187
† „ (Chilgrove)	John W. Woods, Esq.	5	0	6	284 T	31·17	...
Lavington (Beechwood Ho.)	W. J. Collyer, Esq.	5	0	9	...	35·50	150

DIVISION II.—SOUTH-EASTERN COUNTIES—*(continued.)*

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
WEST SUSSEX—*(con.)*						
†Petworth Rectory	Rev. C. Holland	5	2 0	190 R	30·12	136
†Horsham (Leonardslee)	Mr. Ford	5	1 6	273 T	26·92	...
Midhurst (Lynch)	J. Eames, Esq.	6	0 6	160 ?	32·57	...
†Fernhurst [Haslemere]	Miss E. A. Salvin	8	0 10	301	26·90	...
Milland House [Liphook]	Rev. J. M. Heath	18	30 0	350	28·79	...
Shillinglee Park [Haslemere]	Lady Jane Turnour	...	...	...	27·09	...
EAST SUSSEX.						
DEastbourne (Meads Rectory)	Rev. E. A. Adams	5	1 1	...	29·93	162
D† ,, (Pevensey Road)	Miss W. L. Hall	5	4 0	12 L	29·70	171
† ,, (Cemetery)	,, ,, ,,	5	4 0	160 R	28·90	175
†Pevensey Vicarage	Rev. H. Browne	8	0 2	15 R	26·41	...
† ,, (Walls End Cott.)	M. Vidler, Esq., C.E.	8	4 0	10 T	23·04	158
Brighton (West Pier End)	E. Rowley, Esq.	5	...	37	14·55	...
† ,, (Cambridge Rd., Hove)	H. B. Peake, Esq.	5	1 0	111 R	26·28	...
D† ,, (Buckingham Place)	F. E. Sawyer, Esq.	5	1 0	200 R	25·42	179
† ,, (St. James' St.)	E. Rowley, Esq.	5	1 0	37 R	26·74	166
D† ,, (W. W. Lewes Road)	Brighton Water Works	5	3 8	90 R	28·75	175
†Hastings (Bleak House)	Mr. J. Banks	8	1 3	77 R	24·36	142
D† ,, (The Hollies)	A. H. Wood, Esq.	8	3 0	100 R	26·49	165
D† ,, (Cemetery)	Mr. Field	5	0 6	500 T	25·32	149
† ,, (Hollington)	Capt. Lewis	5	1 0	315 B	25·00	168
†Falmer	R. R. Verrall, Esq.	5	3 0	314 R	29·22	133
D†Lewes (Glynde Place)	Mr. J. McLeod	5	2 9	59 T	28·93	151
DRPoynings (Dyke House)	Mr. W. Thacker	5	1 6	680	31·08	175
DRFulking	Mr. J. Thacker	5	1 0	100	33·47	181
DHailsham	Rev. J. Clyde Harvey	5	1 0	100	26·66	140
D†Battle	F. Webster, Esq.	5	1 3	200	28·77	160
DWarbleton Rectory	Rev. G. E. Haviland	5	1 1	180 ?	30·01	200
D†Framfield (The Grange)	Capt. T. G. Drake, R.N.	8	1 2	185 B	30·57	121
D†Uckfield Observatory	C. L. Prince, Esq.	12	6 0	149 R	30·06	145
D†Newick (Ketches)	Miss I. Shiffner	8	0 5	192 T	26·62	154
DSalehurst Vicarage	Rev. A. Orr	...	2 6	120 ?	25·93	121
†Buxted Park	Col. Harcourt	8	1 0	193	27·65	...
D†Maresfield (Forest Lodge)	Captain W. Noble	8	1 2	247 R	30·27	189
†Buxted (Heron's Ghyll)	C. Patmore, Esq.	8	1 2	405 T	31·20	178
D†Hayward's Heath (Asylum)	Rev. T. E. Crallan	5	1 0	250 T	26·54	179
Domons (Northiam)	J. Rock, Esq.	...	0 6	210	25·59	...
DTicehurst	F. Wilton, Esq.	8	1 3	500 T	32·87	183
D†Crowboro' Beacon Observatory	C. L. Prince, Esq.	8	0 6	777 R	35·52	147
DBalcombe Place	J. A. Hankey, Esq.	8	1 3	300 B	31·27	153
Eridge Castle [Tunbridge Wells]	Mr. Rust	8	1 0	400	33·38	123
Forest Row (Ashdown Cottage)	H. J. Slack, Esq.	8	...	430	34·02	...
DEast Grinstead	W. V. K. Stenning, Esq.	5	1 3	356 R	30·69	161
HAMPSHIRE.						
ISLE OF WIGHT.						
Ventnor (Roy. N. Con. Hosp.)	Dr. Williamson	8	3 3	...	26·80	151
D†St. Lawrence	Rev. C. Malden	5	1 0	75 R	28·05	154

DIVISION II.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell.
ISLE OF WIGHT—(*con.*)							
D † Ventnor	Dr. Martin	12	3	0	150 ⅄	28·00	160
D Newport	E. G. Aldridge, Esq.	5	12	9	57 ⅄	32·12	146
D † Ryde	R. Taylor, Esq.	12	7	0	20 ⅄	27·47	125
D † Osborne	J. R. Mann, Esq.	8	0	8	172 ⅄	25·79	168
Bournemouth (Holmwood)	Dr. Compton	5	0	4	116	28·52	158
Christchurch (Carbery)	F. Moser, Esq.	8	0	8	98 ⅄	28·60	148
Lymington	G. J. Jones, Esq.	5	0	7	75	28·12	137
D „ (Wainsford)	H. Fawcett, Esq.	5	1	0	58 ⅄	29·78	147
D Southampton (Cadland)	A. H. Hogg, Esq.	8	3	6	50 T	30·59	195
Fareham	H. Sharland, Esq.	8	10	0	36	27·55	...
D Havant (Leigh Park)	W. H. Stone, Esq.	8	0	10	108	25·51	109
Southampton, Ordnance Survey Office	Maj-Gen. Sir H. James R.E., F.R.S.	5	0	4	74 ⅄	29·69	157
		14	18	6	92 ⅄	26·37	158
„ (Woolston Lodge)	F. Ekless, Esq.	5	1	0	90	29·13	...
„ (Eling House)	W. C. Spooner, Esq.	5	1	0	20 ⅄	26·10	...
D „ (Red Lodge)	R. C. Hankinson, Esq.	5	0	6	200	29·60	180
„ („)	„ „	5	4	0	194	28·27	...
D Botley (Morehill, Shedfield)	Adl. Sir T. S. Pasley, Bt.	8	2	0	160 ⅄	26·64	174
D Bishop's Waltham (Swanmore Ho)	B. P. Shearer, Esq.	5	0	4	390 T	28·39	214
D Winchester (Otterbourne)	J. B. Yonge, Esq.	5	1	3	115 ⅄	24·67	136
Petersfield (Liss Place)	G. E. Coryton, Esq.	7	0	7	250 ⅄	30·83	...
D Alresford (Arle Bury)	F. Marx, Esq.	4	1	6	308 ⅄	27·35	137
Alton (E. Tisted Rectory)	Rev. F. Howlett	5	1	1	420 ⅄	30·44	...
D Selborne (The Wakes)	T. Bell, Esq., F.R.S.	6	4	0	400 ⅄	30·82	165
Alton (Ashdell)	F. Crowley, Esq.	8	3	6	396 ⅄	29·25	...
D Alresford (Wester Court)	T. P. May, Esq.	8	0	9	253 T	23·55	130
D Aldershot	Mr. J. Arnold	8	0	6	325	25·03	163
„ (Bourley—2 miles W.)	„ „ „	8	1	0	370	25·13	150
D Basingstoke (Chapel Hill)	G. Stephens, Esq.	5	1	0	328 T	23·47	180
Rotherwick (Tylney Hall)	C. E. Harris, Esq.	5	0	8	330 T	21·11	...
D † Basingstoke (Sherborne St. John)	Rev. D. W. Chute	5	1	2	276 T	23·95	149
† „ (The Vyne)	W. Wiggett Chute, Esq.	8	1	2	236 T	23·03	124
† „ „ „	„ „ „	3	1	2	236 T	23·44	124
Hartley House	Rev. J. Keate, M.A.	8	1	0	233 B	21·80	...
D † Strathfield Turgiss	Rev. C. H. Griffith	5	3	0	200 ⅄	21·03	154
Heckfield (Park Corner)	J. Martineau, Esq.	5	1	4	258 T	22·36	...
† Strathfieldsaye	Mr. J. Bell	8	1	0	160 T	25·01	138
BERKS.							
D Sunningdale (Lynwood)	Admiral Sir F. W. Grey	8	0	9	264 ⅄	21·73	164
Wokingham (Bearwood)	Mr. Tegg	5	3	0	...	19·87	...
† Reading (Englefield)	E. Robinson, Esq.	5	1	0	190 B	22·59	...
D † „ (Russell Street)	Dr. Workman	5	2	8	159 ⅄	21·80	166
D „ (The Acacias)	A. Palmer, Esq.	5	3	0	146 T	24·07	151
Newbury (Greenham)	Capt. J. Ward, R.N.	5	1	0	260 L	24·41	156
D „ (Welford Park)	Mr. C. Ross	5	0	11	335 ⅄	27·45	195
Maidenhead (Kimber Cottage)	Mr. J. Silver	8	1	2	93 ⅄	20·60	...
D Streatley Vicarage	Rev. J. Slatter	10	0	4	150 ⅄	24·13	148

DIVISION II.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell.
BERKS—(*con.*)							
D Maidenhead (Cookham Vic.)	Rev. R. W. Rogers	5	1	3	75 ?	21·50	183
D „ (The Halls, Cookham)	F. W. E. Jowers, Esq.	5	1	6	108	22·42	173
D Shrivenham (Ashbury Vic.)	Rev. H. Miller	5	1	0	479 ⅄	25·93	156
*Wantage	E. C. Davey, Esq.	5	12	8	320 ⅄	21·22	127
Wallingford (The Castle)	J. Kirby Hedges, Esq.	5	0	9	175 ⅄	20·80	126
D Long Wittenham	Rev. J. C. Clutterbuck	12	1	0	170 ⅄	22·54	140
D Abingdon	W. Belcher, Esq.	5	1	0	176	19·07	139
DIVISION III.—SOUTH MIDLAND COUNTIES.							
HERTS.							
D Watford (Oaklands)	E. Harrison, Esq.	5	5	6	272 T	24·85	195
D Hoddesdon (Field's Weir)	Beardmore & Barnes	20	3	0	82 L	23·65	134
Bayfordbury	W. C. Baker, Esq.	8	0	4	250	25·23	128
St. Albans (Gorhambury)	Mr. G. Bogue	6	2	9	...	24·74	132
D Hemelhempstead (Nash Mills)	J. Dickinson & Co.	12	3	9	237	23·99	159
D Berkhampstead	W. Squire, Esq.	8	1	6	370 B	27·78	169
„ (Northchurch)	Rev. W. Eyre	5	1	0	365 ⅄	27·07	...
Tring (Cowroast)	H. Thomas, Esq.	10	4	2	345	27·84	144
Harpenden (Rothamstead)	J. B. Lawes, Esq. F.R.S.	5	2	0	420	22·72	148
„ „	„ „ „	72x87	2	0	420	24·66	173
D Welwyn Rectory	Rev. C. L. Wingfield	5	0	4	...	24·05	170
„ (Kimpton)	Rev. R. Murray Gawne	5	2	6	100	25·04	...
D Kensworth [Dunstable]	T. Jones, Esq.	5	1	0	902 ⅄	26·50	124
D Ware (Much Hadham)	Rev. H. S. Mott	5	1	0	222 B	24·94	141
Stevenage	Rev. J. O. Seager	8	2	0	319 L	23·92	164
D Buntingford (Aspenden Rectory)	Rev. A. P. Sanderson	5	1	1	329 T	25·55	117
D Hitchin	W. Lucas, Esq.	8	1	0	238 ⅄	21·87	176
D Royston	H. Wortham, Esq.	8	0	6	266 ⅄	21·09	160
BUCKINGHAMSHIRE.							
Eton	Rev. H. Snow	5	1	0	75	20·97	...
D Slough (Stoke)	Mr. W. Hatfield	...	1	0	360	21·64	110
High Wycombe	H. S. Wheeler, Esq.	8	0	9	225 ⅄	23·52	...
D Great Missenden	Mr. J. Begbie	6	1	0	...	29·86	111
Aylesbury	J. Copcutt, Esq., C.E.	12	1	0	...	27·05	...
D Winslow (Addington Manor)	E. Hubbard, Esq., M.P.	8	1	0	309 ⅄	27·02	167
Buckingham (Castle Fields)	E. Parrott, Esq.	5	1	1	318 ?	25·88	173
D Newport Pagnell	R. Littleboy, Esq.	5	2	0	...	20·55	84
OXFORD.							
Henley-on-Thames (Greys)	Rev. N. Pinder	5	1	6	370 T	25·30	...
D Watlington (Swyncombe House)	Mrs. Ruck Keene	5	0	4	700 ?	23·64	90
Thame (Aston Rowant)	T. Taylor, Esq.	8	1	0	395 B	24·72	160
D Oxford (Magd. Col. Laboratory)	E. Chapman, Esq., M.A.	5	0	8	192 ⅄	22·37	137
„ (Radcliffe Observatory)	Rev. R. Main, F.R.S.	10	0	11	208 ⅄	23·18	162
„ „	„ „ „	10	22	0	229 ⅄	21·27	158

DIVISION III.—SOUTH MIDLAND COUNTIES—(*continued.*)

STATIONS	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell.
OXFORD—(*con.*)							
Oxford (Radcliffe Observatory)..	Rev. R. Main, F.R.S..	12	24	0	231	19·41	132
„ „	„ „ „	10	112	0	319 ⅄	13·56	...
D Enstone (Chadlington)	W. Searle, Esq.....	5	4	0	800	23·93	130
D Upper Heyford	Rev. C. B. Mount.....	9	1	2	324 T	19·62	139
ℬ𝔄 *Bicester (Stratton Audley Pk)	G. Glen, Esq.....	5	2	5	381 ⅄	22·51	...
Chipping Norton (Kingham).....	Rev. J. W. Lockwood.	5	3	6	442 B	24·58	...
D Charlbury.....	J. Burton, Esq.....	4	2	0	340	34·90	138
D Banbury (Broughton Lodge) ...	E. C. Morrell, Esq. ...	5	0	6	442	24·47	161
D† „ (High Street).....	T. Beesley, Esq.....	6	7	0	350 B	22·82	175
NORTHAMPTON.							
D King's Sutton	Mr. E. Good	5	1	0	400	23·84	140
D Potterspury [Stony Stratford] ...	Rev. R. E. Crawley ...	5	0	4	...	20·92	183
D Thorpe Mandeville.....	Rev. W. L. Browning	5	1	0	550 ?	23·77	168
Weedon Beck Vicarage	Rev. J. S. Winter.....	8	1	6	280 T	22·47	...
D Northampton	H. Terry, Esq.	5	5	0	253 ⅄	20·83	164
D „ (Gold Street)	S. Law, Esq.	5	6	6	230 ⅄	20·55	171
„	W. G. Phillips, Esq....	5	1	0	...	21·55	140
D „ (Althorp House)...	Mr. W. F. Jakeman ...	8	3	10	310 ⅄	24·66	155
D Wellingboro' (Croyland Abbey)..	E. Sharman, Esq.	5	0	1	...	20·77	161
Kettering (Barton Seagrave) ..	J. B. Tibbits, Esq. ...	7	1	2	270	22·18	...
„	J. Wallis, Esq.	8	1	3	300 B	20·49	168
Naseby (Woolleys).....	*Journal of Horticulture*	...	...		...	23·43	142
Rockingham Castle	Mr. J. Brown	5	1	3	400	24·01	118
D Easton [Stamford].....	C. Day, Esq.	5	1	0	220?	21·95	180
HUNTS.							
D St. Neots (Tetworth Hall)	Miss Kaye	5	0	6	214 T	19·66	145
D „ (Waresley)	Rev. W. M. H. Elwyn	8	1	0	193 ⅄	20·62	135
Huntingdon	Mrs. C. Margetts	5	0	4	52 T	21·22	117
* „ (Wistow)	Rev. T. Woodruff.....	5	1	2	...	20·65	...
Conington Castle	J. M. Heathcote, Esq..	5	1	0	...	20·98	...
Whittlesea Mere	R. Lunn, Esq.	...	...		...	19·68	150
BEDFORD.							
Leighton Buzzard (The Cedars).	W. Abrahams, Esq. ...	6	1	0	300	26·26	103
D Eversholt (Lindon).....	Mr. Clarke.....	5	2	0	...	21·55	124
D Stotfold [Baldock].....	W. Denne, Esq.	5	0	9	220	20·95	147
D Aspley Guise (Oaklands)	E. E. Dymond, Esq....	5	1	1	433	20·63	153
D „ (Hayfield House)..	S. Douglas, Esq.	5	1	1	...	20·98	131
Silsoe	H. Trethewy, Esq. ...	...	1	2	...	21·47	...
Ampthill	W. S. Slinn, Esq.....	5	1	1	375	21·82	119
Biggleswade	C. T. Newbery, Esq...	5	28	0	...	21·37	...
D Potton (Wrestlingworth)	H. J. King, Esq.	...	1	0	...	21·69	157
D Sandy Rectory	Rev. J. Richardson ...	5	0	7	...	20·04	150
D „ (The Lodge)	A. W. Peel, Esq., M.P.	5	1	0	...	19·98	160
Cardington	Mr. J. B. McLaren ...	8	0	0	106	21·37	...
D „ (Staff gauge)	„ „ „	12	3	6	109	20·20	143

DIVISION III.—SOUTH-MIDLAND COUNTIES—(*continued.*)

STATIONS	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell
BEDFORD—(*con.*)							
Cardington	Mr. J. B. McLaren ...	8	36	0	142	17·82	...
Bedford	D. Robie, Esq.	8	0	6	120	20·23	143
Tempsford	Col. W. Stuart	5	0	9	...	18·72	...
CAMBRIDGE.							
D Guilden Morden [Royston]	J. G. Johnson, Esq. ...	5	1	2	...	19·98	154
Abington Pigotts [„]	G. Pigott, Esq.	8	0	6	130 B	21·02	157
D Pampisford Hall	Mr. Morley	5	1	0	113 ⅄	22·33	162
D Granchester Mill	J. Nutter, Esq.	5	4	0	31 ⅄	21·36	170
Cambridge (W.W. Cherryhinton)	H. Tomlison, Esq., C.E.	5	1	0	35 ⅄	21·39	209
D „ (Beech House)	J. Nutter, Esq.	8	4	0	40 ⅄	21·40	161
D „ (Merton Villa)	G. Warren, Esq.	5	1	0	30 ⅄	20·99	158
„ (Sidney Street)	Mr. W. E. Paine	8	51	0	83 ⅄	20·40	158
D* „ (Observatory)	Professor Adams, F.R.S.	5	1	0	85 ⅄	20·79	177
D Cheveley Park	Mr. W. Challis	...	...		...	24·92	94
D Ely (Stretham)	Mr. Edwin Stanley ...	9	4	9	...	18·03	132
Chatteris (Horseway Lock)	R. Lunn, Esq.	...	...		...	16·67	190
March	„ „	9	6	6	...	22·41	137
„	R. Dawbarn, Junr. Esq.	5	1	0	...	22·79	144
Stanground Sluice	R. Lunn, Esq.	...	...		...	19·78	119
D Elm (Coldham Hall)	H. J. Little, Esq.	5	1	0	12	21·89	137
Upwell (Marmont Priory Lock)	R. Lunn, Esq.	...	...		...	22·94	167
D Wisbech (Harecroft Ho.)	A. Peckover, Esq.	8	0	8	11 T	22·92	143
D† „ (Observatory)	S. H. Miller, Esq.	8	0	6	10 T	23·39	161
† „ „ (*monthly*)	„ „ „	5	0	6	10 T	22·62	...
† „ „	„ „ „	8	8	0	18 ⅄	22·67	161
† „ „	„ „ „	20×10	35	0	45 T	19·38	161

DIVISION IV.—EASTERN COUNTIES.

ESSEX.							
Barking	F.H.Parsons, Esq., MD.	5	1	0	...	22·65	92
D Shoeburyness	Capt. Fairford Ellis, RA	5	4	7	12?	20·66	119
Walthamstow	W. R. Birt, Esq.	5	1	5	70 T	20·70	188
Brentwood (Sawyer's Hall Farm)	Rogers Field, Esq., C.E.	5	1	0	270 T	19·83	88
Billericay	F. Carter, Esq., M.D.	5	1	0	...	19·22	...
Maldon (Cold Norton)	C. Clarke, Esq.	5	1	2	...	22·27	116
D „ (Purleigh)	Rev. G. F. Tamplin ...	5	4	0	80?	20·77	148
D Waltham Abbey	The Superintendent ...	8	4	0	83?	22·80	100
Epping (The Hemnalls)	J. Nicholl, Esq.	8	0	8	345 T	24·89	154
Chelmsford	F. Chancellor, Esq.	8	1	0	86 T	20·92	133
D Harlow (Sheering)	Rev. Edward Hill ...	5	1	0	214 T	25·00	191
D „ (Moor Hall)	Mr. Huntley	8	1	6	220 T	24·89	142
Witham (Dorward's Hall)	H. Dixon, Esq.	5	1	6	20?	20·18	...
D Dunmow (High Roding)	Rev. E. Maxwell	5	1	0	252 T	22·60	163
Coggeshall (Feering House) ...	Harris Hills, Esq.	8	1	0	100 T	19·71	...

DIVISION IV.—EASTERN COUNTIES—(*continued.*)

STATIONS	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
ESSEX—(*con.*)						
D Dunmow	H. E. Cockayne, Esq...	12	0 0	250 ⅄	22·55	143
*Colchester (Birch Hall)	Mr. W. Ingle	5	1 0	80	22·08	143
Braintree (Bocking)	S. Tabor, Esq.	12	4 0	200 T	24·26	141
Manningtree (Wix)	R. Field, Esq., C.E....	5	1 0	90 T	18·95	132
D Harwich (Ramsey)	J. Brampton, Esq.	5	1 0	100 ⅄	18·56	119
D Dedham (Lower Park)	W. H. Penrose, Esq....	8	0 6	60 ?	19·28	160
D Saffron Waldon (Audley End) ..	Mr. J. Bryan	5	1 0	163 ⅄	22·93	165
,, ,, ,,	,, ,,	5	1 0	151	22·02	...
D ,, ,,	J. G. Bellingham, Esq.	5	1 0	180 ⅄	23·47	142
,, ,, (Ashdon)	Rev. J. T. Walker	8	1 6	300 ⅄	23·37	133
SUFFOLK.						
Nayland (Tendring Hall)	Mr. G. L. Rushmore ...	8	0 8	135	20·68	105
D Hadleigh (Boxford)	Rev. J. Byng	8	0 9	...	21·25	142
D Sudbury	J. Alexander, Esq. ...	5	3 10	116 B	22·15	175
D Ipswich (Bishop's Hill)	G. A. Biddell, Esq. ...	5	1 0	104 ⅄	18·57	144
,, (Woodbridge Road)	S. Alexander, Esq.	...	1 1	90	20·27	138
D Hadleigh (Aldham)	T. F. Lloyd, Esq.	5	2 6	...	22·92	160
D Woodbridge (Grundisburgh) ...	P. Harris, Esq.	5	3 9	...	19·55	158
Ashbocking Vicarage	Rev. M. B. Cowell ...	5	7 3	231 T	17·01	93
D Wickham Market	G. Binyon, Esq.	8	0 6	100 ⅄	20·36	110
Saxmundham (Carlton Hall) ...	Mr. Clark	8	5 0	...	21·95	160
D Bury St. Edmunds (Drinkstone Pk)	Mr. Nichol	8	1 2	250	23·88	122
D† ,, ,, (Abbeygate St.)	T. C. Hinnell, Esq. ...	6	35 0	...	25·35	76
D Stowmarket (Wetherden Rec.)...	Rev. C. J. Goodhart ...	8	0 6	185 T	20·84	169
D† Bury St. Edmunds (Beech Hill)	H. Turner, Esq.	6	1 0	...	25·87	78
† ,, ,, (Westley) ...	R. Burrell, Esq.	5	1 6	...	23·58	...
D† ,, ,, (Barton Hall)	Mr. W. Allan	5	1 0	...	23·26	153
D† ,, ,, (Culford)	Mr. P. Grieve	5	1 6	...	24·72	149
†Ixworth	Rev. W. Steggall	5	1 10	...	23·79	152
D† ,, (Walsham-le-Willows)..	Miss Martineau	5	0 11	...	22·58	160
† ,, (Barningham)	J. Fison, Esq.	8	0 10	125 ?	18·83	...
†Eye (Yaxley)	Rev. W. H. Sewell ...	8	1 0	108 T	20·06	131
†Lowestoft (Gisleham)	Rev. H. Jodrell	5	1 6	36 T	17·83	...
† ,, (Carlton Colville)	G. Edwards, Esq. C.E.	8	0 9	6 T	18·23	...
D† ,, (Somerleyton Hall) ...	Mr. Rix	8	0 9	60	17·02	132
D† ,, (,, Rectory)	Rev. C. J. Steward ...	8	1 0	50	18·56	160
NORFOLK.						
D Diss	T. E. Amyot, Esq.	5	1 0	96	21·09	166
D† ,, (Dickleburgh)	Francis Dix	8	3 6	120 L	19·54	107
D† Geldeston [Beccles]	E. T. Dowson, Esq. ...	5	1 0	40 B	18·16	146
D ,, [,,]	Rev. D. Gillett ...	5	1 0	50	19·20	165
†[illegible]West Tofts [Brandon]	Mr. R. Martin	5	1 6	91 T	21·87	157
Mulbarton	Rev. R. G. Lucas	5	1 5	...	21·07	95
D Hingham ..	Rev. J. M. Du Port ...	...	...	...	22·33	...
D† Downham Market (W. Dereham)	Mr. C. Blanchfield ...	5	0 11	20	21·66	176
†Stoke Ferry (Wereham)	F R Hawkes-Mason Esq	8	0 5	60 T	21·33	158

DIVISION IV.—EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain 1873	Days on which .01 or more fell.
			ft. in.	feet.	inches.	
NORFOLK—(*con.*)						
D † Stoke Ferry (Wereham)	F R Hawkes-Mason Esq	5	6 0	66 T	19·99	155
Outwell Sluice	R. Lunn, Esq.	...	...	...	21·48	144
D * † Downham Market (Bexwell)	Rev. E. J. Howman	5	1 0	120 T	22·96	148
† „ „ (Fincham)	Rev. W. Blyth	3	4 0	50 T	22·27	...
Carleton Forehoe	Rev. J. M. DuPort	...	...	...	22·56	...
D Swaffham (Pickenham Hall)	E. A. Applewhaite, Esq	5	1 0	160 T	22·43	156
Yarmouth (Halvergate Hall)	Miss Gillett	5	3 3	48 ⅄	20·17	128
Norwich (Eaton)	J. Pymar, Esq.	6	1 3	...	21·48	...
„ (Postwick)	Rev. J. M. Du Port	...	...	...	22·13	...
† „ (St. Catherine's Close)	Mrs. Evans	5	2 3	120 T	21·59	...
D „ (Literary Institution)	The Secretary	12	30 0	53 T	20·30	140
† „ (Thorpe)	W. Birkbeck, Esq.	5	1 0	137 T	25·09	189
D Acle (Lingwood)	Miss Burroughes	5	1 6	...	21·54	141
† „ (Rectory)	Rev. R. W. Kennion	8	0 9	40 ⅄	19·08	112
D † Filby	Mr. Crisp	5	2 4	11	19·17	113
D Sprowston (Oak Lodge)	J. C. Hardy, Esq.	5	1 0	...	21·68	175
Norwich (Cossey)	H. Culley, Esq.	5	1 0	...	22·06	174
D † „ (Honingham Hall)	Lady Bayning	5	0 6	88 T	22·28	165
„ (Honingham)	Rev. J. M. Du Port	...	...	90	22·59	...
D † Dereham (Mattishall)	„ „ „	8	1 2	165 ⅄	22·64	165
℟ A * Swaffham (Grammar School)	C. J. Drury, Esq.	5	1 10	239 ⅄	21·58	166
„	Rev. J. M. Du Port	...	...	...	23·87	...
† East Dereham	G. H. Cooper, Esq.	8	3 0	161 T	24·36	...
„ „	Mr. W. T. Gidney	9	3 0	160 ⅄	19·68	...
St. Germans (Outlet Syphons)	R. Lunn, Esq.	...	...	...	20·96	95
Swaffham (Dunham)	Rev. J. M. Du Port	...	...	...	25·26	...
Drayton	„ „ „	...	...	...	22·99	...
D Reepham (Hackford)	W. D. Bircham, Esq.	5	1 0	...	21·57	163
D Cawston	Rev. T. H. Marsh	5	1 0	110	23·75	205
North Walsham (Worstead)	Mrs. Cooke	5	0 10	...	22·81	153
D Lynn (North Wootton)	Rev. W. W. Clarke	5	1 2	...	22·18	147
D „ (Hillington Rectory) *	Rev. H. Ffolkes	5	4 6	89	21·72	155
D „ („ Hall)	Mr. Platt	...	1 0	74	22·71	117
Colkirk	Rev. J. M. DuPort	...	...	...	22·00	...
Holt (Letheringsett Hall)	W. H. C. Hardy, Esq.	8	...	...	21·41	152
Cromer	J. Cooper, Esq., M.D.	...	1 0	90	20·42	143
D Burnham (Westgate)	W. H. Spencer, Esq.	3	5 10	13	21·33	148
Holkham	J. Davidson, Esq.	8	0 0	39 L	21·42	141
D „	„ „ „	12	4 0	43	19·97	142
D Wells	H. R. Rump, Esq.	5	1 0	16 T	20·23	165
D Hunstanton	Mr. Nisbet	11	3 8	60 ⅄	20·58	121

* "The returns from this station for 1872 were omitted in their proper place solely owing to the gauge having been on one occasion suffered to run over."—Note added at the request of the observer; we should have thought it unnecessary to state, that, to the best of our knowledge, none but absolutely perfect records are inserted in these tables.—Ed.

DIVISION V.—SOUTH-WESTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 in hes.	Days on which ·01 or more fell.
WILTS.							
D Landford	J. R. Wigram, Esq. ...	5	1	5	170 T	27·79	166
D Salisbury (Alderbury)	Rev. R. S. Hutchings..	5	0	8	263	27·62	165
D „ (West Dean)	Rev. W. L. W. Eyre...	5	1	0	139 B	25·56	142
D „ (Wilton House)	Mr. Challis	8	0	5	180 ⅄	27·90	151
„ (Roche Court)	C. W. Bell, Esq.	5	1	2	...	27·14	...
„ (Woodford)	H. Hinxman, Esq.	5	1	2	150 ⅄	24·66	...
Salisbury Plain (Chiltern Ho.)	R. Hayward, jun., Esq.	11	4	0	380 ?	24·76	166
D „ „ (Orcheston)	Rev. J. Wardale	6	0	8	300 ⅄	24·69	142
Warminster (Downside)	W. J. Stent, Esq.	8	1	6	...	29·88	154
Imber Vicarage	Rev. W. Slatter	5	4	0	400	26·15	157
D Ludgershall [Andover]	E. G. Fawcett, Esq....	8	1	4	422 ⅄	28·77	155
D Trowbridge (Sunny Side)	W. J. Mann, Esq.	5	1	1	190 T	24·26	154
„ (Water Works)	H. Tomlison, Esq. C.E.	5	1	0	183	24·04	127
D Marlborough (College)	Rev. T. A. Preston ...	5	0	0	456 T	27·71	181
„ „	„ „ „	5	1	0	456 T	25·68	177
„ „	„ „ „ ...	8	0	8	456 T	26·65	176
„ (Kingsbury Street)	W. C. Merriman, Esq.	15	4	0	500	24·31	...
D „ (Mildenhall)	Rev. C. Soames	5	1	0	467 T	25·89	166
Calne (Compton Bassett)	Mr. J. Allen	8	1	0	400	25·55	157
D Chippenham (Tytherton)	Major Gritton	5	1	2	157 B	22·89	181
D Swindon (Draycot Foliatt)	T. Arkell, Jun., Esq....	5	1	2	...	27·10	177
D „ (Penhill)	T. Arkell, Esq.	5	0	10	400 ?	24·05	164
D Thames' Head [Cirencester]	J. H. Taunton, Esq., C.E.	8	4	0	350 ⅄	26·25	167
DORSET.							
D Kimmeridge	J. Mansel-Pleydell, Esq	5	0	4	80	28·37	117
D Weymouth (Osmington Lodge)	Major Hall	5	1	0	225 ?	31·18	166
D Upwey	J. Miller, Esq.	5	1	0	70	29·42	176
D Abbotsbury	Mr. A. Dight	5	3	0	150	25·94	110
D Lyme Regis	H. Tucker, Esq.	5	4	6	146 B	31·93	178
D Bridport (St. Andrew's Villas)	A. Stephens, Esq.	8	0	8	60 B	27·35	150
„ („) *monthly*	„ „	8	0	8	45 B	27·36	...
D Blandford (Longthorns)	J. Mansel-Pleydell, Esq	5	0	4	340 B	32·99	154
D „ (Bingham's Melcombe)	Rev. C. W. Bingham...	5	1	3	300 ?	33·26	167
D Beaminster	Rev. A. Codd	5	1	0	...	34·62	218
Cerne Abbas (Melbury)	Mr. T. C. Elliott	12	2	9	...	32·29	...
D * Wimborne Minster (Chalbury)	Rev. G. H. Billington.	5	2	0	338 ⅄	29·00	160
D Shaftesbury	T. Ackland, Esq.	5	1	1	722 T	29·11	144
DEVON.							
† Kingsbridge (Bolt Tail) (58)	W. Balkwill, Esq.	5	1	0	297 L	37·38	...
D † „ (Fore St. Hill) (56)	G. Fox, Esq.	5	1	0	63 B	40·02	168
† Plymouth (Stonehouse)	Rev. P. H. Newnham..	5	1	0	20	36·47	218
† „ (Old Town St.) ...(52)	A. P. Balkwill, Esq....	5	35	0	150	35·37	...
D „ (Drake's Reservoir) ...	G. D. Bellamy, Esq....	5	0	6	140	37·43	194
„ („) *second gauge*	„ „ ...	...	...		...	36·50	...
D „ (Navigation School)...	J. Merrifield, Esq. LL.D	8	9	2	75	30·52	180

NOTE.—The numbers in parentheses on this and following pages refer to Maps inserted between pages 148 & 149, of *British Rainfall*, 1872.

DIVISION V.—SOUTH-WESTERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain 1873 inches.	Days on which ·01 or more fell.
DEVON—(*con.*)							
†Plymouth (Saltram Gardens) (51)	Mr. J. Snow	5	0	3	96 T	42·01	...
† „ (Ham) (53)	Rev. C. T. C. Trelawny	5	2	0	94 ⅄	40·17	136
D†Ivybridge (49)	Dr. Liddell	10	3	0	175 B	43·61	186
†PlymptonStMary(Ridgew'y) (50)	Miss B. T. Phillipps	5	0	6	116 ⅄	45·62	190
„ „ (Hemerdon) (69)	Rev. G. L. Woollcombe	5	1	0	350	49·00	...
Totness (Dart View) (45)	E. Windeatt, Esq.	5	1	0	120	40·15	...
DPaignton (Hollacombe)	J. Greenfield, Esq.	5	7	0	70 ?	29·44	185
DK A†Torquay (Lamorna) (43)	W. Pengelly, Esq, F.R.S	5	0	9	200 ⅄	33·44	185
†Dartmoor (Lee Moor) (44)	W. L. Martin, Esq.	5	0	9	860 ⅄	60·07	...
D† „ (Head Weir, Sheepstor) (41)	G. D. Bellamy, Esq.	5	1	0	...	63·47	215
D „ (Holne Vicarage) (33)	Rev. J. Gill	5	1	0	650	60·59	239
D†Ashburton (Druid House) (32)	Fabyan Amery, Esq.	5	1	0	570 T	48·17	208
D†Dartmoor(Prison Reservoir) (34)	Dr. Power	5	0	2	1400	67·29	235
D „ („ Garden) (34)	„ „	5	1	2	1371	50·69	235
D „ (Rundlestone) (35)	„ „	5	1	2	1500?	59·19	207
†Teignmouth (Landscore) (29)	Mrs. Clark	5	0	6	125 T	36·41	...
D „ (Brookbank) (66)	G. W. Ormerod, Esq.	5	1	2	74 L	32·35	172
D†Ilsington (Middlecott Ho.) (23)	Alfred Lyon, Esq.	9	3	6	639 T	40·44	163
†Tavistock (Public Library) (38)	Mr. W. Reynolds	8	20	0	283 T	45·04	190
† „ (West Street) (38)	T. Windeatt, Esq.	1	4	6	286 T	50·40	...
†* „ (Mount Tavy) (37)	H. Clark, Esq.	5	1	0	316 T	50·10	...
D B A „ (Kilworthy Lane) (67)	W. Merrifield, Esq.	5	1	0	362 T	50·36	195
DDartmoor(Widdecombe Grendon)	F. West, Esq.	...	0	10	950	59·51	131
†Milton Abbot (Endsleigh) (26)	Mr. Cornelius	5	1	0	180 ?	46·75	...
D†Bovey Tracey (22)	J. Divett, Esq.	5	0	6	94 ⅄	41·89	197
D†Coryton Lew Down (21)	Mr. T. Symons	12	6	0	445	44·83	202
D†Exmouth (Budleigh Salterton)	R. Walker, Esq.	5	4	0	33	34·34	159
„ (Rill Court)	Major Lind	5	0	11	117	28·91	161
Polapit Tamar [Launceston]	E. Coode, Esq.	12	2	10	...	43·82	...
Sidmouth (Blackmore Hall)	W. Strahan, Esq.	5	1	0	25	30·59	161
* „ (Belgrave)	Dr. Mackenzie	5	0	6	26 ⅄	28·36	149
D „ „	„ „	5	0	6	26 ⅄	28·64	151
„ (Fore Street)	S. Chick, Esq.	10	25	0	43 ⅄	24·13	...
„ (Sidmount)	Dr. Radford	5	1	0	149 ⅄	29·31	161
„ („)	„ „ „	5	8	6	195 ⅄	26·90	160
Seaton (White Cliff Glen)	T. F. A. Byles, Esq.	5	2	0	125	28·67	...
DClevelands [Lyme Regis]	E. L. Ames, Esq.	5	1	0	463 ⅄	32·14	160
†Topsham (Clyst St. George)	Rev. H. T. Ellacombe	5	1	3	76 T	30·74	...
†Exeter (High Street) (17)	W. H. Ellis, Esq.	5	47	11	184 ⅄	31·93	153
† „ „ „	„ „	10	44	3	180 ⅄	31·17	158
D† „(Devon & Exeter Institution)	Mr. E. Parfitt	6	13	7	155 ⅄	33·72	150
D† „ (Manston Terrace) (18)	Miss Dymond	5	0	1	165 T	34·25	164
DHoniton (Gittisham)	C. Hardy, Esq.	5	1	0	...	34·23	145
Okehampton (Oaklands) (19)	W. H. Holley, Esq.	5	1	0	500	47·08	230
D B A Holsworthy (Clawton) (16)	W. W. Melhuish, Esq.	5	1	1	300?	43·87	208
DHatherleigh(Jacobstowe) (14)	Dr. Madden	8	1	2	340 B	39·66	217
D†Exeter(Brampford Speke) (13)	W. H. Gamlen, Esq.	5	1	0	140 T	32·78	200
† „ „ „ (*monthly*) (13)	„ „ „	8	0	2	140 T	33·19	...

DIVISION V.—SOUTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which .01 or more fell.
DEVON—(*con.*)							
D Zeal Monachorum .....(63)	Rev. H. J. A. Fothergill	5	0	9	600	37·58	170
Cullompton (Clyst Hydon)	Rev. J. Huyshe.....	...	1	0	200 ⅄	30·40	...
D „ (Strath Culm)	C. R. Collins, Esq.....	8	0	6	159	31·34	160
„ (Bradninch)	H. Matthew, Esq.....	12	1	6	234	30·90	...
D † Honiton (Broadhembury)	Rev. W. Heberden ...	5	1	6	400 T	31·05	198
Chulmleigh (Eggesford) .....(73)	Mr. W. A. Spreadbury	8	1	2	400	37·19	...
D Tiverton (Springfield)	H. Stokes, Esq.....	5	1	0	300 ?	39·07	211
D „ (Exe Villa)	H. S. Gill, Esq.....	5	0	9	230	37·21	209
D „ (Chevithorne)	Rev. W. H. Askwith..	5	1	0	510 B	37·85	213
Chulmleigh (Witheridge).....(8)	Rev. J. P. Benson.....	11	1	0	...	36·02	183
D Torrington (Langtree Wick).....	Miss Nunes	5	1	0	...	45·28	206
D Great Torrington .....(61)	Rev. S. Buckland	5	1	1	321 L	40·21	179
Tiverton (Cove) .....(9)	W. N. Row, Esq.	11	0	4	450 ?	36·71	...
D S. Molton (Meshaw) .....(62)	Rev. W. H. Karslake	8	0	6	472 L	38·72	202
D „ (Rose Ash) .....(60)	Major Davy	8	0	6	650 T	40·51	185
D * Bideford (Buckish).....(7)	Rev. J. H. Kirwan ...	5	1	1	550 B	44·56	219
D „ (Horwood)	Rev. J. Dene	5	1	0	...	34·19	190
* „ (Northam) .....(5)	Rev. J. D. Churchward	5	1	3	173	35·40	199
S. Molton (Castle Hill).....(4)	Mr. D. Wilson	12	3	5	...	41·62	...
Barnstaple .....(3)	T. Mackrell, Esq.	8	1	0	31 ⅄	39·30	205
D „ (Bratton Fleming)(2)	Rev. H. S. Pinder.....	5	3	0	700 ?	52·20	200
Ilfracombe Hotel .....(1)	Mr. W. Clark.....	12	9	0	34	32·23	188
Martinhoe	Rev. C. Scriben	5	1	0	850	60·82	...
CORNWALL.							
Land's End (Mayon House)	J. Symons, Jun., Esq..	5	3	0	308	37·94	122
D † Helston	M. P. Moyle, Esq.....	5	5	0	115 T	39·01	195
† Penzance (Regent's Parade).....	W. H. Richards, Esq.	12	3	0	94 T	43·07	...
D „ (Poltair).....	H. R. Trelawny, Esq...	5	0	6	247	49·68	247
D Camborne (Crowan)	Mr. J. T. Rodda.....	5	1	2	419 L	42·58	177
D „	„ „ „	11	1	2	230 L	45·15	181
† Redruth (Tehidy Park).....	Mr. Mill.....	5	0	6	100 T	40·79	...
† Truro (Strangways Terr.).....	C. Barham, Esq., M.D.	8	2	0	71 B	38·26	...
D † „ (Royal Institution).....	Mr. Newcombe	5	40	0	56 ⅄	37·31	216
† „ (Penarth).....	N. Whitley, Esq.	10	1	0	190 ⅄	35·87	210
St. Agnes	Mr. Opie.....	5	1	2	278 B	37·06	173
St. Austell (St. Mewan).....	Rev. G. L. Woolcombe	5	0	9	275	45·68	184
* „ (Cosgarne)	C. Truscott, Junr., Esq.	5	1	0	194 ⅄	44·73	225
D † * „ (Trevarna).....	W. Coode, Esq.	5	0	6	300 ⅄	43·46	186
* „ (Trevarrick)	C. Truscott, Jun., Esq.	5	1	0	169 ⅄	44·39	226
D „ (Polcarne)	J. Coode, Esq.	5	1	0	206 T	44·99	213
Par Station (Penellick).....	W. E. Geach, Esq. ...	5	0	9	280 B	34·95	...
D St. Enoder (Retyn)	J. K. Martyn, Esq. ...	8	2	6	150 ?	39·91	201
D † Newquay	Mr. W. H. Tregidgo...	6	1	9	90 B	34·32	175
D † Liskeard (Dean Terrace) ...(47)	S. W. Jenkin, Esq. C.E.	5	1	1	375 ⅄	48·51	217
„ (St. Cleer) .....(68)	„ „ „	5	1	1	620 ⅄	49·43	...
D † Saltash (Pentillie Castle)...(46)	Mr. C. Edwards	5	1	3	150 B	45·77	199
D † Callington (Hingston Down)(39)	Captain Richards	11	1	0	850 T	53·55	192

DIVISION V.—SOUTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell.
CORNWALL—(*con.*)							
†Callington (Church Street)...(40)	Mr. G. Serjeant.....	5	3	0	490 T	50·36	248
†Bodmin (Castle Street)	Capt. Liddell, R.N. ...	8	2	4	338 T	47·66	...
D† „ „ „	„ „	5	1	0	338 T	49·84	227
† „ „ „ (*weekly*)	„ „	5	0	1	338 T	50·68	...
D† „ (Fore Street)	A. Hambly, Esq.	8	2	6	336 T	49·98	228
† „ (Warleggan)	Rev. D. Clements	8	2	6	650	53·81	230
†Wadebridge (Guinea Port)	Mr. C. Jordan	8	2	6	23 T	38·38	176
D† „ (Treglines, St. Minver)	Mr. T. Liddell, Jun....	10	3	0	140 T	31·54	181
D†Launceston (Altarnun).....(28)	C. U. Tripp, Esq.	5	1	0	570 B	59·92	225
† „ (Hexworthy)...(27)	H. M. Harvey, Esq....	5	2	7	410 T	47·15	181
†Camelford (Lanteglos Rect.) ...	Rev. J. J. Wilkinson..	8	2	6	450	47·78	213
15A Jacobstow	Rev. F. T. Batchelor..	5	1	0	200	42·20	199
SOMERSET.							
Chard (Cricket St. Thomas).....	Viscount Bridport.....	5	1	0	400 B	37·25	194
DCrewkerne (Bincombe House) ...	F. J. Sparks, Esq. ...	5	1	2	250	32·93	149
DIlminster	J. Knott, Esq.	5	1	0	133 ⩚	30·75	170
„ .....(*monthly*)	„ „ „ ...	5	1	0	133 ⩚	29·40	170
D „ (South Petherton).....	W. Blake, Esq.	8	0	6	200 ?	24·43	165
„ („ „)(*monthly*)	„ „	5	1	2	...	23·52	...
Ilebrewers (Walrond Park)	J. Ostler, Jun., Esq....	5	0	8	116 T	25·17	146
Ilchester	J. W. Bourne, Esq. ...	8	2	0	40 ?	26·76	146
DLangport (Long Sutton)	R. W. Fry, Esq.	5	1	0	60	23·21	145
D*Wellington (Sunnyside)	W. Elworthy, Esq. ...	5	1	0	...	30·84	174
D*Taunton (Fullands School).....	W. Reed, Esq.	5	1	4	...	27·89	145
D „ (College School).....	Rev. W. Tuckwell ...	5	1	0	80 B	24·94	150
„ (The Mount)	H. Alford, Esq.	5	1	1	88 B	28·60	186
„ (The Castle).....	G. Gillett, Esq.	8	1	6	50	28·11	169
D*Wiveliscombe	B. Boucher, Esq.	5	1	2	...	33·21	208
DTaunton (Lydeard House)	C. Smith, Esq.	5	1	0	...	29·55	178
DGlastonbury (Street)	W. S. Clark, Esq.....	8	1	0	60	25·92	178
Wells (Dinder)	Rev. T. J. Bumpsted	8	2	6	140 B	30·85	152
DBurnham	Captain Estlin	5	1	0	18 ⩚	23·89	162
DFrome (Mells Rectory)	Rev. J. H. Horner. ...	5	1	0	342 ⩚	33·76	207
E. Harptree(SherborneReservoir)	Bristol Water Works	5	1	0	338	38·63	...
Chew Magna	„ „ „	5	1	0	160	33·45	...
DBath (Paragon)	Dr. Barter	5	6	0	112 ⩚	25·39	164
D „ (Literary Institute)	C. P. Russell, Esq.....	5	8	0	75 ⩚	25·34	155
D „ (Weston)	.....	5	10	0	190 L	25·90	177
Batheaston (Reservoir)	A. Mitchell, Esq.	12	2	0	226 T	24·07	129
DYatton (Chelvey)	Rev. J. Matthew	5	0	5	37 ?	32·66	179
Barrow Gurney Reservoir.....	Bristol Water Works	5	1	0	320	35·99	...

DIVISION VI.—WEST MIDLAND COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
GLOUCESTER.						
Bristol (Canon's Marsh)	A. S. Nash, Esq.	5	12 6	21 ⅄	31·87	147
„ (Small St.)	Bristol Water Works	12	25 0	40	30·09	...
Clifton (South Parade)	Dr. G. F. Burder	8	0 6	192 ⅄	32·07	...
Bristol (Cotham Park)	W. F. Denning, Esq.	5	...	...	31·19	...
Westbury (Cote House)	H. St. V. Ames, Esq.	12	3 0	200	30·10	...
D Fairford (Kempsford)	R. A. Iles, Esq.	5	0 8	...	22·73	135
Nailsworth (Spring Hill)	D. J. Humphries, Esq.	8	2 0	160 ?	31·26	194
D Berkeley (Salter-street)	J. H. Cooke, Esq.	5	8 0	60	24·03	157
D Cirencester (The Firs)	J. Bravender, Esq.	5	0 8	352 ⅄	26·63	168
D Stroud (Brimscombe Port)	J.H.Taunton,Esq.,C.E.	8	10 0	200 ⅄	25·95	135
D „ (Upfield)	Miss Stanton	5	0 11	226 ⅄	23·35	165
D „ (Castle Villas)	J. Bateman, Esq.	...	1 0	240 B	25·79	186
D Fairford (Hatherop Rectory)	Rev. R. P. Davies	8	1 3	412 ⅄	26·03	150
„ (The Dean)	H. Arkell, Esq.	5	...	...	24·77	136
D Frampton-on-Severn (Saul Lodge)	W.B.Clegram,Esq.C.E.	5	3 6	42 ⅄	24·06	177
Northleach (Yanworth)	T. Arkell, Esq.	5	1 0	...	23·16	...
D Cheltenham (Cowley Manor)	Mr. J. Sadler	5	1 4	682	31·59	185
Gloucester (Witcomb Court)	A. Bubb, Esq.	8	2 0	290	24·96	...
D „ („ Water Works)	T. Small, Esq.	8	3 0	297 ⅄	27·03	138
„ (Quedgeley Ho.)	J. C. Hayward, Esq.	5	0 10	50 ?	23·54	...
„ (Barnwood Ho)	Dr. Wood	8	3 6	60 ?	24·25	...
„ (Park House) *monthly*	Alfred Price, Esq.	5	3 6	50 ⅄	22·34	...
D „ (County Asylum)	E. Toller, Esq., M.D.	6	0 4	100	22·36	151
Huntly (Rectory)	Rev. H. Miles	5	0 8	210 B	25·15	...
D Cheltenham (Prestbury)	G. Makgill, Esq.	5	0 8	250 ?	23·77	150
„ (Keynsham Bank)	D. J. Humphries, Esq.	8	6 6	232 ⅄	24·25	156
„ (Chelt Sew. Wks.)	„ „ „	8	2 0	154 ⅄	23·39	141
D Newent (Boyce Court)	General Drummond	5	1 0	133	23·42	145
D Moreton-in-Marsh (Frogmore)	W. Arkell, Jun., Esq.	5	0 9	...	24·32	134
HEREFORD.						
D Ross (Rocklands)	J. M. Herbert, Esq.	8	1 10	150 ?	32·09	171
D „ (The Graig)	H. Southall, Esq.	5	1 0	200 ?	27·49	184
D* „ (Sellack Vicarage)	Rev. W. C. Ley	5	0 6	...	26·94	163
Bryngwyn	J. Rankin, Esq.	...	...	...	26·94	...
Much Marcle (Careswall)	T. Charles, Esq.	5	3 0	423	25·87	186
Ledbury (West Bank)	T. E. Wheatley, Esq.	5	1 0	400	21·46	96
D Hereford (Fownhope Vicarage)	Rev. T. West	5	1 1	192 B	25·34	162
D „ (Richmond Place)	E. J. Isbell, Esq.	8	5 8	188 ⅄	24·46	198
„ (Davison's Nursery)	„ „ „	8	1 0	206 T	24·32	...
„ (Hagley Park)	A. Hutchinson, Esq.	5	0 6	298 B	24·57	...
„ (Tupsley)	P. Ballard, Esq.	5	1 1	242	22·30	...
D „ (Stretton)	Rev H. C. Key	5	1 0	198 T	23·98	153
D Staunton-on-Wye	Rev. H. W. Phillott	5	1 0	255	24·47	174
Kington (Lynhales)	S. Robinson, Esq.	8	1 0	...	25·42	60
Bromyard Vicarage	Rev. Nash Stephenson	8	0 6	...	28·28	178
D Leominster (West Lodge)	E. P. Southall, Esq.	5	1 0	255 T	22·75	161
„ (Leysters)	Rev. T. S. Hewitt	5	0 4	700 ?	26·82	...

DIVISION VI.—WEST MIDLAND COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which .01 or more fell.
			ft. in.	feet.	inches.	
SHROPSHIRE.						
Burford [Tenbury]	Lord Northwick	5	0 11	150 ?	25·01	...
D Ludlow (Knowbury)	Rev. J. B. James	6	0 4	1000 ?	29·58	135
„ (Mill Street)	W. Marston, Esq.	5	1 1	337 T	26·36	177
Craven Arms (Stokesay)	Rev. J. D. La Touche	5	1 0	...	25·32	...
Bridgenorth (Quatt School)	Mr. L. Roach	5	4 2	194 ⅄	21·93	117
Wenlock (Staunton Long Vic.)	Rev. M. Hopton	8	1 2	700	22·75	...
D Bishop's Castle (More Rectory)	Rev. A. S. Mall	5	1 3	640 T	26·18	174
Church Stretton (Cardington)	Rev. W. Elliot	5	1 0	700	27·41	177
D „ (Woolstaston)	Rev. D. Carr	5	1 0	790 B	30·57	206
Coalbrookdale (Buildwas Parsng.)	Rev. G. T. Ryves	...	1 0	180	24·74	...
„ (Horsehay)	C. T. Baugh, Esq.	5	2 8	...	24·83	...
D Shiffnal (Haughton Hall)	Rev. J. Brooke	5	3 5	353 ⅄	24·76	182
Shrewsbury	Marshall & Co.	10	4 4	192	16·70	83
„	Dr. H. Johnson	...	3 0	250	34·87	...
„ (Fitz Manor)	R. Middleton, Esq.	5	2 6	287 B	21·26	...
D Newport (Cheswell Grange)	T. Radcliffe, Esq.	...	1 0	250	22·83	159
D Wem (Sansaw Hall)	F. G. Tippinge, Esq.	5	1 0	310	23·47	173
Oswestry (Hengoed)	Rev. A. R. Lloyd	5	6 0	470 ⅄	31·34	...
D Dudleston (Erwy)	G. F. Reynolds, Esq.	8	1 0	335 B	25·06	180
D Market Drayton (Nort'n-in-Hales)	Rev. F. Silver	8	1 0	335 ⅄	24·78	88
D „ (Adderley)	Rev. Athelstan Corbet	5	0 9	245 ?	26·03	194
BA* Whitchurch	A. B. George, Esq.	5	3 0	...	26·87	108
STAFFORD.						
D Wolverhampton (Merridale Road)	John Thrustans, Esq.	5	1 0	428 ⅄	26·35	180
D „ (Town Hall)	A. Morgan, Esq., C.E.	5	13 0	479	25·27	174
D „ (Wrottesley)	Mr. E. Simpson	8	1 0	490	24·48	160
D Patshull Gardens	Mr. S. James	...	1 5	400	23·94	138
D Tamworth (Lichfield Street)	W. Arnold, Esq.	5	1 0	160 ?	24·15	155
Lichfield (St. Michael's)	Rev. J. J. Serjeantson	5	0 3	323	26·90	...
D Weston-under-Lyziard [Shiffnal]	Hon. Rev. J. Bridgeman	3	0 10	...	24·03	203
Penkridge (Rodbaston)	H. Ward, Esq.	5	0 10	...	23·96	199
D Shushions Manor	T. James, Esq.	5	1 0	325	23·69	183
Burton-on-Trent	J. Matthews, Esq.	5	6 0	152 ⅄	22·23	161
D „ „ (Horninglow)	R. W. Abbotts, Esq.	5	4 0	150	23·23	174
D Stoke (Barlaston)	W. Scott, Esq.	5	0 6	500 T	27·59	167
D Cheadle (The Heath House)	J. C. Philips, Esq.	5	1 0	647 T	29·22	190
D Ellastone [Ashbourne]	Rev Sir C. R Lighton, Bt.	5	3 0	400 B	26·23	164
Stoke (Stanley Reservoir)	‡Trent & Mersey Navga.	5	3 1	550 T	26·80	130
„ (Etruria)	„ „ „	5	4 2	440	27·88	188
Alstonfield Vicarage	Rev. W. H. Purchas	5	1 2	...	33·97	167
Leek (Rudyard)	Trent & Mersey Navga	5	12 7	500 T	27·45	127
Knypersley [Congleton]	„ „ „	5	14 0	500 T	25·27	127
Wincle [Macclesfield]	„ „ „	5	5 0	500 ⅄	39·19	139

‡ Returns supplied by T. W. Dodds Esq., C.E.

DIVISION VI.—WEST MIDLAND COUNTIES.—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea level feet.	Depth of Rain. 1873 inches.	Days on which .01 or more fell
WORCESTER.							
Northwick Park	Lord Northwick	8	1	6	...	27·06	...
ℬ Upton-on-Severn (The Haughs)	W. P. Bayliss, Esq.	5	...		...	22·19	...
D Evesham (Lansdowne)	R. Burlingham, Esq.	8	4	6	124 B	20·27	142
West Malvern	A. H. Hartland, Esq.	8	1	6	850 B	26·58	...
D Great Malvern (Church Street)	W. Sandoe, Esq.	5	0	7	352 ⅄	25·22	190
„ „ (The Wyche)	„ „	5	0	7	658 ⅄	21·03	...
D Worcester (Sebright Lawn)	Mrs. Burgess	5	0	8	130 T	29·63	...
D Tenbury (Orleton)	T. H. Davis, Esq.	5	0	9	200 ?	25·58	182
D Bromsgrove (The Ford House)	G. Dipple, Esq.	11	4	4	273 ⅄	21·65	162
Kidderminster (Winterfold)	J. Harward, Esq.	10	5	6	327 ⅄	22·61	156
D Stourbridge (Hagley Rectory)	Hon. Mrs. Lyttleton	8	0	5	636 ⅄	26·68	185
Moseley [Birmingham]	T. L. Plant, Esq.	5	4	0	487 ⅄	27·26	168
WARWICK.							
Radway (Ivy Lodge)	Rev. G. Miller	5	1	1	530 T	24·54	175
D Alcester (Sambourne)	A. Winkfield, Esq.	5	1	3	...	23·28	86
D Henley-in-Arden (Arden House)	G. R. Dartnell, Esq.	5	2	2	400 ?	21·94	151
Leamington (Upper Parade)	S. U. Jones, Esq.	5	0	8	195 ⅄	21·38	159
„ (Blackdown Hill)	E. Field, Esq.	5	0	8	250 ?	22·57	168
D Rugby School	F. E. Kitchener, Esq.	8	3	0	383 T	21·66	178
D Coventry (Priory Row)	J. Gulson, Esq.	8	1	0	279 ⅄	22·86	174
D „ (Radford)	Miss Atkins	8	1	0	305	21·07	164
D „ (Coundon)	R. Caldicott, Esq.	5	1	2	350	22·75	186
Bickenhill Vicarage	Rev. W. R. Capel	5	1	2	371 ⅄	22·39	147
D Willey Rect. [Lutterworth]	B. P. M. Tayler, Esq.	8	1	3	...	22·78	195
D Birmingham (Botanic Gardens)	Mr. Latham	5	5	2	...	24·28	187
† „ (Bloomsbury Street)	D. Smith, Esq.	8	0	8	340 T	28·78	163
Nuneaton (Stretton House)	T. J. Scott, Esq.	5	0	6	...	23·05	145
„ (Camp Hill)	R. Ramsden, Esq.	...	0	8	350 ?	20·59	...
D Oscott (St. Mary's College)	Rev. S. Whitty	5	0	6	461	23·39	188

DIVISION VII.—NORTH MIDLAND COUNTIES.

LEICESTER.							
Market Harborough	S. Watson Cox, Esq.	5	1	0	...	24·85	...
Bruntingthorpe	Rev. F. H. Bridges	5	0	8	...	22·36	...
Lutterworth (Ashby Magna)	Rev. E. Willes	5	1	6	400	20·79	...
† Market Harborough (Fleckney)	J. B. Putt, Esq.	5	0	8	411 T	24·15	...
D † Wigston	T. Burgess, Esq.	8	0	10	220 T	23·01	150
Leicester (Knighton House)	R. Harris, Esq.	5	1	3	...	23·70	...
„ (Freeman's Common)	H. Billson, Esq.	5	0	10	...	23·59	...
„ (Belmont Villas)	„ „	8	0	6	235	27·57	150
D † Thornton Reservoir	C. Tebbutt, Esq.	10	2	8	420 ?	24·20	134
D Thurcaston (Cropston)	„ „	8	1	0	...	23·35	158
D Melton Mowbray (Dalby Hall)	Mr. G. Jones	8	2	6	480 B	20·89	171
D Ashby-de-la-Zouch	G. H. Gibson, Esq.	5	1	0	...	24·42	171

DIVISION VII.—NORTH MIDLAND COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft in.	feet.	inches.	
LEICESTER—(*con.*)						
Loughborough (Cedar Cottage)...	J. Giles, Esq.	5	0 9	400 ?	25·75	...
D Melton Mowbray (Coston Rect.)	Rev. A. M. Rendell ...	5	1 0	300 ?	22·64	173
D Waltham-le-Wolds	Mr. E. Ball	5	1 6	520	24·06	186
D Harston [Grantham]	C. Beasley, Esq.	...	1 3	...	22·08	179
D † Belvoir Castle	W. Ingram, Esq.	8	1 0	237 T	19·82	154
RUTLAND.						
Ayston Hall	Rev. J. H. Fludyer ...	...	...	...	23·03	...
D Tickencote	W. Hayes, Esq.	5	1 0	166 ⅄	21·27	144
Burley-on-the-Hill	Mr. W. Temple	8	3 0	...	19·78	120
Ryhall	Rev. C. Potchett	5	1 4	...	22·16	119
D Market Overton	Miss H. E. G. Wingfield	8	0 11	...	21·34	173
D Thistleton Rectory	Rev. C. A. Holmes ..	5	0 6	...	22·10	148
LINCOLN.						
Stamford (Barn Hill Ho.)	Dr. Newman	5	1 0	116 T	20·93	...
* Bourne (Wytham-on-the-Hill) ...	A. C. Johnson, Esq. ...	5	1 3	167 ?	20·39	134
Spalding (Pode Hole)	Mr. A. Harrison	12	0 3	20 ⅄	19·63	...
D † Grantham	J. W. Jeans, Esq.	8	0 6	179 ⅄	19·36	139
Sleaford (Heydour)	Rev. G. F. Deedes	5	2 4	...	21·60	111
D Boston	W. H. Wheeler, Esq. C.E	5	6 6	24 ⅄	20·21	157
D Stubton [Newark]	G. Nevile, Esq.	5	4 6	...	20·58	137
D Lincoln (Navenby)	Rev. J. Hays	8	0 6	...	19·95	158
Horncastle (Miningsby)	W. H. Wheeler, Esq, C.E	5	0 6	162	19·60	132
D Lincoln (Longhills)	A. S. Leslie Melville Esq	...	0 6	110 ?	21·64	139
D „ (Branston Hall)	Mr. J. Wright	5	1 0	130 ⅄	21·19	140
„ (Bracebridge Co. Asylum)	E. Palmer, Esq., M.D.	5	1 0	200 ?	20·90	...
„	M. S. & L. R. Co ‡	9	3 6	26	18·31	143
Horncastle (Bucknall)	W. Carter, Esq.	5	1 6	...	20·55	147
Gate Burton	M. S. & L. R. Co.	9	3 6	96	18·19	129
Market Rasen (Faldingworth) ...	Rev. Irvin Eller	8	1 2	100	21·14	...
D Louth	T. W. Wallis. Esq. ...	5	6 0	109 L	24·69	151
„ (Westgate)	F. Fawssett, Esq.	5	0 10	100	23·83	...
D „ (Calcethorpe)	D. Grant Briggs, Esq.	8	0 10	360	24·65	177
Market Rasen	M. S. & L. R. Co.	9	3 6	100	19·31	132
Stockwith	„ „ „	9	3 6	21	16·79	86
Brigg	„ „ „	9	3 6	16	19·91	91
Grimsby	„ „ „	9	15 0	42	21·02	147
Barnetby	„ „ „	9	3 6	51	18·92	139
Crowle (Keadby)	„ „ „	...	...	10	18·94	113
D Ulceby (Killingholme)	Rev. J. Byron	5	1 4	60 ⅄	22·02	180
Appleby	Rev. J. E. Cross	5	0 9	60 L	20·02	...
New Holland	M. S. & L. R. Co.	9	3 6	18	20·52	165

‡ Kept for the Canals Department of the Manchester, Sheffield, and Lincolnshire Railway Company. Returns supplied by R. D. Heathcott, Esq.

DIVISION VII.—NORTH-MIDLAND COUNTIES—(*continued*).

STATION.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea level	Depth of Rain. 1873	Days on which 01 or more fell
					feet.	inches.	
NOTTS.							
D Ruddington Grange	J. Paget, Esq.	8	1	1	230 ?	21·78	172
Nottingham (Gedling)	Hn&RvO.W.Forrester	5	3	0	130?	22·39	180
Southwell (Oxton)	H. Sherbrooke, Esq.	2	2	0	...	22·06	...
,,	Miss Gaster	5	0	6	200	21·20	...
D Mansfield (Grove House)	R. Tyrer, Esq.	5	0	11	350 ⅄	23·69	168
Ollerton (Whitemoor)	H. Horncastle, Esq.	5	0	9	175 ?	21·25	156
D Welbeck Abbey	Mr. W. Tillery	5	4	0	88 ⅄	22·41	137
Worksop	M. S. & L. R. Co.	9	3	6	127	19·36	148
,, (The Mount)	J. Ellis, Esq.	5	2	0	200 ⅄	19·62	145
Retford	M. S. & L. R. Co.	9	3	6	52	19·19	124
D ,, (Babworth)	Mr. J. Douglas	5	1	0	...	20·72	147
DERBY.							
Bretby Park [Burton]	Mr. W. Brown	5	4	6	340	25·46	155
Winshill [,,]	J. Matthews, Esq.	5	1	0	272	22·30	150
D Melbourne	R. T. Tasker, Esq.	...	0	6	...	26·89	162
D Trent College	C. U. Tripp, Esq.	5	1	0	150 ?	20·82	171
D Derby	Messrs. J. Davis & Son	5	6	0	180 ⅄	21·18	166
,, (Spondon)	J. T. Barber, Esq.	5	0	7	262 T	22·05	...
D ,, (West Hallam)	Rev. C. J. Newdigate	5	3	6	356 ?	23·17	167
,, (Long Lane Vic.)	Rev. S. Joy	8	3	6	400	30·48	161
,, (Duffield)	Mr. W Bland	5	0	10	200 ?	24·96	153
Belper	J. G. Jackson, Esq.	5	0	8	222 ⅄	24·83	170
D Ripley (The Elms)	P. Wright, Esq, F.C.S.	5	1	6	515 T	22·86	157
Brassington Vicarage	Rev. W. P. Orton	8	1	2	770 B	34·33	137
† Matlock (Willersley Gardens)	Mr. J. Tissington	6	1	3	440	37·21	...
† ,, Bath	R. Chadwick, Esq.	5	1	6	500 T	31·10	...
D Chesterfield (Grassmoor Colliery)	E. Bromley, Esq.	5	9	1	...	21·76	186
,,	M. S. & L. R. Co.	9	3	6	248	22·96	...
,, (Linacre Reservoir)	Rev. J. M. Mello	8	...		...	20·42	...
† Chatsworth	T. Speed, Esq.	8	6	0	404 B	26·24	...
† Buxton (Axe Edge)	E. J. Sykes, Esq.	8	1	0	1620 B	36·01	...
,, (Poole's Cavern)	,, ,, ,,	8	5	0	1085 T	44·63	190
† ,, (Devonshire Hospital)	,, ,, ,,	8	5	0	1005 T	43·27	212
† Stony Middleton	Rev. U. Smith	5	4	0	692 B	31·08	133
Kilnarsh (Norwood)	M. S. & L. R. Co.	9	3	6	238 T	18·17	117
Comb's Moss	,, ,, ,,	9	3	6	1669 T	43·02	...
,, Reservoir	,, ,, ,,	9	3	6	710 T	38·85	206
† Chapel-en-le-Frith	,, ,, ,,	9	3	6	965 T	34·68	176
Burbage House	John Farrar, Esq.	5	2	10	1277 ⅄	30·26	...
Bamford	J. H. Moore, Esq.	5	0	3	530 T	36·29	...
Castleton	Miss Hall	...	1	0	700	36·76	...
† Woodhead	M. S. & L. R. Co.	9	3	6	878 T	42·77	206

DIVISION VIII.—NORTH-WESTERN COUNTIES.

STATION.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell.
CHESHIRE.							
D Nantwich (Cholmondelly Cas.)	Mr. J. Malcolm	8	1	6	42	29·71	182
Chester (Pulford Hall)	R. Massie, Esq.	5	3	0	51 T	21·21	179
BA Tarporley	Rev. A. J. Tollemach	5	2	6	320	23·57	186
D Congleton (Buglawton Vic.)	Rev. W. Besant	8	5	0	347	25·12	171
Bosley Minns	M. S. & L. R. Co.	9	3	6	1210 T	25·65	114
„ Reservoir	„ „ „	9	3	6	590 T	26·28	145
D Chester (Newton Nurseries)	J. Dickson & Sons	8	0	6	62 ⅄	24·49	157
Middlewich (Bostock Hall)	Major France Hayhurst	5	2	9	157 ⅄	25·60	144
D Siddington (Thornycroft Hall)	Mr. Povey	5	3	0	377 ⅄	26·83	182
Macclesfield	M. S. & L. R. Co.	9	3	6	539 T	32·39	125
D „ (Park Green)	Mr. W. Jeffery	8	2	1	450 ⅄	30·70	190
D Chelford	C. Nichols, Esq.	5	1	6	260 ⅄	29·65	161
Northwich (Winnington)	H. Neumann, Esq.	8	2	0	56	25·26	174
D Frodsham (Foxhill)	L. W. Reynolds. Esq.	5	1	0	219 T	22·85	175
D Neston (Hinderton)	Reginald Bushell, Esq.	5	1	0	215 ⅄	21·74	187
„	Capt. Monk, R.N.	5	4	0	50 ?	21·26	139
Bollington (Spond's Hill)	M. S. & L. R. Co.	9	3	6	1279 T	28·56	...
Whaley	„ „ „	9	3	6	602 T	34·09	229
Runcorn (Weston Point)	L. Rosenberg, Esq.	8	1	6	15	22·25	...
Altrincham (Barrington House)	J. Newton, Esq., C.E.	5	1	0	105	31·38	...
D Thelwall	T. G. Rylands, Esq.	5	1	0	118 ⅄	24·53	189
† Birkenhead (Bidstone Obs.)	J. Hartnup, Esq.	8	0	6	182	23·70	176
Marple Aqueduct	M. S. & L. R. Co.	9	3	6	321 T	24·86	133
„ Top Lock	„ „ „	9	3	6	543 T	26·53	136
Godley Reservoir	J.F.Bateman,Esq.FRS	...	...		500	29·28	...
Mottram Hill End	M. S. & L. R. Co.	9	3	6	680 T	32·28	178
„ Matley's Field	„ „ „	9	3	6	399 T	28·37	178
Newton	„ „ „	9	3	6	396 T	24·86	212
Arnfield Reservoir	J.F.Bateman,Esq.FRS	...	..		575	35·58	...
D Staleybridge (Swineshaw)	Mr. C. Beever	8	3	0	884 ⅄	38·25	175
† Rhodes Wood Reservoir	J.F.Bateman,Esq.FRS	12	1	0	520	37·66	...
† Woodhead „	„ „ „	12	0	10	680	41·14	...
† Torrside „	„ „ „	12	1	6	600	38·62	...
LANCASHIRE.							
D Warrington (Bewsey Street)	L. W. Reynolds, Esq.	5	1	0	49 ⅄	27·06	193
D „ (Arpley)	R. Vawser, Esq., C.E.	10	10	0	33 ⅄	27·09	204
„ (Cemetery)	„ „	10	1	0	32 ⅄	27·98	...
Liverpool (Grove Park)	J. R. Darsie, Esq.	3	6	0	200	25·52	144
D „ (Walton-on-the-hill)	A. R. Andersson, Esq.	5	1	11	119 ⅄	27·05	191
D Heaton Chapel (Roseleigh)	J. Curtis, Esq.	8	2	3	235 T	29·75	209
Denton Reservoir	J.F.Bateman,Esq.FRS	...	...		324	27·30	...
Gorton „	„ „ „	...	...		263	27·99	...
Manchester (Withington)	J. King, Junr., Esq.	5	1	0	110	26·33	182
† „ (Old Trafford)	G. V. Vernon, Esq.	8	2	7	106 ⅄	29·82	198
D „ (Plymouth Grove)	J. F. Roberts, Esq.	8	3	9	150 ⅄	30·09	192
„ (Eccles)	T. Mackereth, Esq.	10	3	0	145 ⅄	31·13	219

DIVISION VIII.—NORTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea Level. feet.	Depth of Rain. 1873 inches	Days on which 01 or more fell.
LANCASHIRE—(*con.*)							
Manchester (Eccles)	T. Mackereth, Esq.	5	34	0	179 ⅄	25·40	219
Salford (Town Hall)	„ „ „	5	11	0	119 ⅄	32·32	232
Manchester (Ardwick)	J. Casartelli, Esq.	9	3	0	149 ⅄	32·29	186
† „ (Piccadilly)	M. S. & L. R. Co.	9	40	0	194 T	28·66	180
Fairfield	„ „ „	9	6	0	312 T	33·08	201
D St. Helen's (Rainford Hall)	G. McKibbin, Esq.	5	0	9	147 ?	30·07	199
Prestwich Reservoir	J. Bateman, Esq., F.R.S	...	...		...	33·05	...
D Shore Top (Outwood)	H. Bridson, Esq.	12	1	0	295 T	34·55	185
Oldham (Waterhouses)	M. S. & L. R. Co.	9	3	6	345 T	36·64	181
„ (Piethorne)	H. Andrew, Esq.	5	4	0	800 T	34·96	265
Ga* „ (Royton)	Mr. B. K. Bentley	5	1	0	544 ⅄	36·40	183
Bolton-le-Moors (The Folds)	H. H. Watson, Esq.	10	3	6	286 T	42·69	...
D „ „	J. Rigby, Esq.	6	6	9	331	41·63	210
D „ (The Freehold)	W. Musgrave, Esq.	9	6	6	352 ⅄	43·49	196
„ (Heaton)	J. Wrigley, Esq.	6	1	3	500	42·80	149
D „ („)	J. S. Holdsworth, Esq	10	3	6	497 ⅄	41·15	212
„ (Hurst Bank)	J. Watkins, Esq.	...	3	1	442 ⅄	39·33	...
„ (Moss Bank)	R. H. Ainsworth, Esq.	8	1	2	570	47·94	210
D „ (Halliwell New Road)	W. Tyson. Esq.	5	1	4	549	47·04	204
„ (Belmont)	J. Wrigley, Esq.	6	0	9	800	52·60	162
D Wigan (Water Works)	J. L. Hunter, Esq., C.E.	8	1	6	228 ⅄	34·28	167
Rivington	G. F. Deacon, Esq., C.E.	...	1	0	700 T	42·24	212
Entwistle	J. Wrigley, Esq.	6	0	0	700	51·50	161
Rochdale (Nayden Dane)	C. E. Cawley, Esq. M.P.	5	1	6	900	39·87	...
D Ormskirk (Rufford)	J. Porter, Esq.	5	0	8	38 T	30·31	201
Southport	J. Baxendell, Esq.	5	2	8	23 ⅄	27·27	187
D Over Darwen	Rev. W. H. Blamire	5	1	0	600	50·96	206
Oswaldtwistle	W. Gourlay, Esq.	6	0	9	635	48·17	201
Rawtenstall (Hapton Reservoir)	E. Barber, Esq.	8	1	0	900 ⅄	48·80	226
Blackburn (W. Works Office)	J. F. Bateman, Esq. FRS	...	...		400	42·22	...
„ (Pickup Reservoir)	„ „ „	...	...		720	42·40	...
„ (Guide Reservoir)	„ „ „	...	...		650	43·30	...
D „ (Audley Place)	J. Shackleton, Esq.	5	0	6	450	44·10	211
D Lytham	L. Fisher, Esq., M.D.	10	0	6	37 ⅄	31·21	205
Burnley W. Works (Swindon)	J. Emmett, Esq.	18	18	0	750 ⅄	45·10	...
Kirkham (Weeton Res.)	J. Bradley, Esq.	10	1	0	150	21·89	...
Blackpool (South Shore)	G. Sharples, Esq.	10	1	8	29	26·27	...
D „ (Arnold House)	T. Ward, Esq.	8	1	0	30 T	27·99	146
D Eccleston (Elswick Lodge)	S. King, Esq.	10	1	4	50 T	32·95	204
D Stonyhurst College	Rev. S. J. Perry, F.R.S	11	1	0	376 ⅄	47·03	210
„ „ (*monthly*)	„ „	11	0	8	376 ⅄	44·46	...
Preston W. Works. Alston	R. W. Hunter, Esq., C.E.	8	1	2	320 ⅄	38·60	...
Knowl Green	„ „	8	1	2	400 T	38·43	...
Jeffrey Hill	„ „	8	1	2	900 T	45·36	...
Loud-scales	„ „	8	1	2	400 T	40·78	...
Spade Mill	„ „	8	1	2	400 T	36·97	...
Clitheroe (Downham Hall)	R. Assheton, Esq. M.P	10	1	6	464 ⅄	39·49	...
Garstang (The Parsonage)	Rev. T. B. Armitstead	5	1	0	71 T	35·61	195

DIVISION VIII.—NORTH WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which .01 or more fell.
			ft. in.	feet.	inches	
LANCASHIRE—(*con.*)						
D Garstang (Calder Mount)	C. Wilson, Esq.	...	10 0	100 ?	40·41	187
D „ (Vale House)	J. Jackson, Junr., Esq.	6	4 3	455 ⅄	41·82	207
„ (Grizedale)	J. Bradley, Esq.	10	1 0	480 ?	41·15	...
D Lancaster (South Road)	W. Roper, Esq.	12	3 6	114 ⅄	34·57	196
† Lancaster (Caton)	Rev. A. Christopherson	5	1 6	118 ⅄	37·13	173
Hest Bank	T. Ransome, Esq.	12	2 2	58	31·97	...
Melling (Hornby Castle	H. J. Reid, Esq.	12	3 2	100	38·81	140
Arkholme (Storr's Hall)	F. F. Pearson, Esq.	5	1 0	220 T	38·37	...
Barrow	F. Slade, Esq	7	2 0	60	30·14	201
D Cartmel (Flookburgh)	T. R. Croasdale, Esq.	5	2 4	70 B	37·46	132
D † „ (Allithwaite)	Mr. W. R. Nash	5	1 0	88 T	36·57	184
† „ (Holker)	Mr. Wilson	8	4 8	155 ⅄	40·66	203
Grange (Bay Villa)	Amos Beardsley, Esq.	8	3 2	25 ⅄	45·52	173
Cartmel Vicarage	Rev. Canon Hubbersty	5	1 7	100 T	43·10	...
D *Ulverston	J. H. Matthews, Esq.	5	5 6	131 ⅄	46·13	208
Powka Beck	J. Lewis, Esq.	12	1 5	500	44·94	...
Cartmel (Broughton Hall)	Major Ainsworth	5	2 8	230 T	48·21	192
Broughton-in-Furness	Rev. F. A. Malleson	5	1 3	40	52·16	190
„ (Woodland Parsonage)	Rev. E. C. Shawfield	5	3 9	100	48·37	221
† Coniston (Lanehead)	Mrs. Bywater	5	1 0	287 T	75·96	224
† Monk Coniston Park	V. Marshall, Esq.	10	4 11	150 ⅄	69·00	...
Coniston (The Parsonage)	Rev. C. Chapman	5	1 0	205	87·33	231
Hawkshead	W. Lane, Esq.	5	1 2	180	71·03	192
Wray	Rev. W. R. Morris	...	...	...	68·49	...

DIVISION IX.—YORKSHIRE

WEST RIDING.						
D Sheffield (Handsworth Grange)	W. D. Gainsford, Esq.	5	2 10	288 T	17·65	128
D „ (Brincliffe Rise)	A. Chadburn, Esq.	5	1 2	500 T	22·97	153
„ (Edge)	M. S. & L. R. Co.	9	3 6	336 T	23·14	160
D „ (Broomhall Park)	D. Doncaster, Jun. Esq.	10	2 0	330 ⅄	22·40	184
D † Redmires	J. Gunson, Esq.	10	4 0	1100 T	31·92	205
„	„ „	8	4 0	1100 T	32·13	...
D Rivelin	„ „	10	4 0	554 T	27·54	183
„	„ „	8	4 0	554 T	26·66	...
D Crookes	„ „	10	2 0	634 T	21·41	173
„	„ „	8	2 0	634 T	21·92	...
Sheffield (Tinsley Locks)	M. S. & L. R. Co.	...	...	143 T	21·54	135
D Tickhill	Dr. Dixon	8	1 0	61 ⅄	18·33	129
D † Rotherham (Moorgate Grove)	R. Chrimes, Esq.	5	1 0	262 ⅄	17·63	140
D „ (Wath-upon-Dearne)	W. M Burman, Esq.	8	0 8	180 ⅄	16·92	159
D „ (West Melton)	Rev. J. Boyd	6	0 10	172	16·84	137
Elsecar	M. S. & L. R. Co.	9	...	175 T	18·79	139
Doncaster	„ „ „	9	...	35 T	19·39	139
D „ (Magdalens)	Mr. J. Howorth	5	4 6	46	18·18	140

DIVISION IX.—YORKSHIRE—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
WEST RIDING—(*con.*)						
Worsborough	M. S. & L. R. Co.	9	...	225 T	22·33	167
†Dunford Bridge Station	„ „ „	9	3 6	954 T	42·44	198
D† „ „ (Reservoir)	Mr. G. Whitfield	12	2 0	1100 T	37·72	221
†Penistone	M. S. & L. R. Co.	9	3 6	717 T	25·78	109
†Carlcotes	„ „ „	9	3 6	1075 T	44·19	163
Barnsley	„ „ „	9	...	175 T	15·90	129
D „ (Church Street)	Dr. Sadler	5	3 10	350 T	18·45	173
†Saddleworth (Station)	E. Greenwood, Esq.	10	5 0	640 T	36·60	...
Denshaw	H. Andrew, Esq.	5	4 0	1050 T	34·66	232
†Marsden (Standedge)	E. Greenwood, Esq.	8	2 0	1150 T	42·50	...
Ackworth School	W. B. Fletcher, Esq.	5	1 6	135	19·07	162
Snaith (Balne Vicarage)	Rev. T. S. Ackland	5	1 6	25 ⊼	23·89	141
DGoole	T. Kendall, Esq.	9	3 4	...	20·02	212
†Meltham (Harden Moss)	J. B. Abbey, Esq.	8	1 0	1200 T	43·33	...
† „ (Grange)	„ „ „	8	1 0	925 T	34·68	...
DSlaithwaite (Blackmoorfoot)	J. Stanway, Esq.	8	1 0	800	29·18	175
Golcar (Bank Field)	J. E. Ramsden, Esq.	5	0 8	400 T	32·46	183
Longwood (Bilberry Edge)	J. B. Abbey, Esq.	8	1 0	1100	35·21	...
D†Huddersfield (Dalton)	J. W. Robson, Esq.	8	0 6	350 ⊼	22·87	187
DMirfield (Cote Wall)	E. B. W. Balme, Esq.	8	0 9	200	18·65	124
Rastrick	A. Clay, Esq	5	1 3	410	19·31	157
Halifax (Warley Moor)	J.F.Bateman,Esq,FRS	...	...	1425	36·10	...
† „ (Well Head)...*monthly*	J Waterhouse,Esq.FRS	12	0 11	487 ⊼	25·56	...
„ („) ...*daily*	„ „ „	7	1 0	527 ⊼	32·64	192
„ (Victoria)	J.F.Bateman,Esq.FRS	5	1 0	795	30·84	...
„ (Gibbett)	„ „ „	5	1 0	568	29·61	...
„ (Ramsden Wood)	„ „ „	5	1 0	816	37·75	...
† „ (Moorside)	L. J. Crossley, Esq.	8	1 0	429	26·53	182
„ (Midgley Moor)	J.F.Bateman,Esq,FRS	...	...	1350	39·60	...
„ (Ovenden Moor)	„ „	...	0 10	1375	36·40	...
„ (Walshaw Dean)	„ „	...	...	1380	40·00	...
„ (Ogden)	„ „	...	...	990	33·01	...
Wakefield (Stanley Vic.)	Rev. R. Burrell	5	1 0	100	19·83	173
Methley Park	J.Richardson,Esq.C.E.	5	0 9	98	20·29	119
DSouth Milford Rectory	Rev. F. J. Young	5	1 4	60 T	22·62	172
DBradford (Mechanics' Institute)	C. Lund, Esq.	5	75 0	400 ⊼	19·96	141
„ (The Exchange)	J McLandsborough Esq	8	65 6	366 ⊼	21·44	...
„ (Stubden)	C. Gott, Esq., C.E.	8	1 0	1075	43·71	236
„ (Doe Park)	„ „	8	0 9	810 ⊼	35·61	211
„ (Chellow Dean)	„ „	10	5 0	650 ⊼	24·75	132
D „ (Queensbury)	W. Foster, Esq.	5	1 6	1050 ⊼	34·66	159
„ (Heaton Res.)	C. Gott, Esq., C.E.	8	1 0	530	25·37	143
DLeeds (Leventhorpe Hall)	J. T. Leather, Esq. C.E	10	2 0	90 ⊼	19·58	103
† „ (Holbeck)	Messrs. Marshall & Co.	10	32 0	127 ⊼	17·50	110
D „ („)	„ „ „	5	1 8	95 ⊼	19·50	163
„ („ W. Works Depot)	E. Filliter, Esq, C.E.	8	0 9	93	21·12	161
„ (Woodhouse Moor)	„ „ „	8	0 9	307	21·36	169
D „ (Weetwood Hall)	H. C. Marshall, Esq.	5	0 7	400 ⊼	23·04	201

DIVISION IX.—YORKSHIRE—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which .01 or more fell.
WEST RIDING—(*con.*)							
Leeds (Weetwood Reservoir) ...	E. Filliter, Esq., C.E.	8	0	9	328	23·10	178
D „ (Allerton Hill)	T. Fenwick, Esq., C.E.	5	0	7	418 ⅄	21·48	163
D „ (Crag Hill, Horsforth) ...	James Fox, Esq., C.E.	5	0	10	350 ⅄	23·41	201
„ (Eccup)	E. Filliter, Esq., C.E.	8	0	9	340	23·94	196
D Bashall Lodge [Clitheroe]	W. Garnett, Esq.	5	1	10	217 ⅄	50·50	200
Harewood (Arthington)	E. Filliter, Esq., C.E.	8	0	9	139 ⅄	23·50	164
D Thornton-in-Craven	T. Wilson, Esq.	5	5	4	456 ⅄	34·69	218
Ilkley	J. I. Dymond, Esq. ...	8	0	8	500	29·80	205
Skipton (Woodlands)	J. Heelis, Esq.	5	0	8	430	28·59	...
Slaidburn (Whiteholme)	Mrs. Birchall	5	1	3	475 T	48·20	186
Wetherby (Ribston)	Mr. Jones	5	1	4	...	26·63	...
† York (Bootham)	J. F. Fryer, Esq.	5	0	6	50 ⅄	18·80	160
„ (Cherry Hill)	H. Richardson, Esq....	5	1	4	50	19·87	
Otterburn-in-Craven	W. Gomersall, Esq. ...	5	1	0	510 ⅄	39·46	133
Long Preston (Riversdale)	J. Heelis, Esq.	8	0	8	...	29·98	...
Harrogate	J. Coupland, Esq.	8	0	6	380 T	26·69	149
Barden Reservoir	C. Gott, Esq., C.E. ...	8	1	2	746 ⅄	46·39	216
D †Settle (Langcliffe)	Miss M. I. Sedgwick...	8	1	9	623 T	41·48	196
Pateley Bridge (Grimwith Res.)	C. Gott, Esq., C.E. ...	8	1	0	890 ⅄	37·27	200
D „ „ (Fog Close Ho.)	E. Warburton, Esq. ...	5	2	4	431 ⅄	32·23	203
D BA „ „ (Castle Stead)...	Mr. A. C. Young	5	1	0	410 ⅄	33·22	182
D BA Malham Tarn	Mr. Coulthard	5	1	1	1190 T	53·05	224
D Arncliffe	Rev. W. Boyd	8	2	9	750 T	53·76	229
Ingleborough	J. Farrer, Esq.	10	6	2	...	36·01	...
D Ripon (Littlethorpe)	Mrs. Swire	5	1	0	70 T	20·52	157
„ (North Lodge)	F. D. Wise, Esq.	5	1	0	120	19·63	...
D Buckden	Rev. W. R. Metcalfe...	10	2	7	800	57·48	235
Wharfedale (Oughtershaw Hall)	C. H. L. Woodd, Esq.	8	2	0	1175 T	61·35	153
„ („ Swarthghyll)	„ „	5	1	6	1350 ?	61·73	...
Dent (Stone House)	Mrs. Nixon	5	1	5	700	60·27	210
D Sedbergh (Thorne Hall)	Miss Elam	5	1	1	400 T	47·02	218
EAST RIDING.							
D Patrington	W. B. Pugh, Esq.	5	0	3	10 ⅄	22·63	176
D † Hull (York Parade, Beverley Rd.)	J. Smith, Esq.	8	3	10	11 T	22·09	175
D „ (People's Park)	Mr. E. Peak	5	0	6	6	24·25	174
D „ (Derringham)	W. Lawton, Esq.	5	1	0	9 ⅄	20·89	170
D Cottingham	J. H. Hill, Esq.	8	1	3	27 T	20·02	176
D Beverley (New Walk)	W. Lakin, Esq.	8	1	0	45 ⅄	21·46	166
D „ (Alexandra Terrace) ...	T. Dyson, Esq.	12	8	0	54 ⅄	16·94	151
D Thorganby (Thicket Priory)	Miss M. C. D. Jefferson	6	1	4	26 T	16·73	...
D Pocklington (Warter)	J. Coxon, Esq.	5	1	10	230 T	24·34	189
„ (Gt. Givendale)	Miss Singleton	5	4	3	473 ⅄	29·60	...
D Lowthorpe (The Elms)	H. Onslow Piercy, Esq.	5	1	0	63	19·29	175
Ganton Hall [Scarborough]	Mr. Boult	5	1	0	250 B	21·90	159
NORTH RIDING.							
Flaxton Grange	H. Richardson, Esq....	5	1	5	90	20·34	...
† Malton	H. Hurtley, Esq.	10	1	0	75 T	20·71	...

DIVISION IX.—YORKSHIRE—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches	Days on which ·01 or more fell
NORTH RIDING—(*con.*)							
D BA*Filey Reservoir	Mr. D. Philliskirk	5	0	9	183	21·07	137
D Bedale (Thorpe Perrow)	W. Culverwell, Esq.	5	1	6	172	19·29	150
Beadlam Grange	J. H. Phillips, Esq.	5	0	7	192 T	28·60	...
† Scarborough	Dr. Cornelius Fox	5	1	0	102 ⅄	19·72	196
Leyburn (Wensley)	G. W. Wray, Esq.	7	2	3	650 ⅄	21·53	...
BA*Northallerton	Dr. Hodgson	5	1	3	133 T	19·92	...
Catterick (Tunstall)	H. C. Marshall, Esq.	5	1	0	350	19·05	...
D Grosmont	H. B. Dunn, Esq.	5	1	0	185 T	18·88	87
Danby	Rev. J. C. Atkinson	5	0	8	485 T	29·33	...
Whitby (North Lighthouse)	Rev. F. W. Stow	5	1	0	198 T	17·04	...
,, (Ruswarp)	C. S. Wake, Esq.	5	1	6	7 T	19·82	...
D BA*,, (Guisbro' Road)	M. Simpson, Esq.	5	2	0	184 ⅄	19·07	177
Greta Bridge (Thorpe Grange)	Miss Dodgson	5	0	10	431 T	20·80	...
D Redcar (Easington Rect.)	Mr. T. Brayshow	5	1	6	600	19·55	121
D Middlesboro' (Grey Towers)	W. R. J. Hopkins, Esq.	...	1	6	250	17·18	206
D ,, (Marton Hall)	H.W Bolckow,Esq.MP	8	1	8	152 T	19·20	195
Guisborough (Hutton Hall)	J. W. Pease, Esq. M.P.	5	0	10	370	20·88	160
,, (Upleatham)	Mr. M. Gray	4	0	4	330 ⅄	17·30	...
D Middlesboro' (Southfield Villas)	W. Fallows, Esq.	5	1	6	21	15·86	166

DIVISION X.—NORTHERN COUNTIES.

DURHAM.							
Eaglescliffe [Yarm]	Rev. J. Hull	5	1	0	80 ⅄	19·69	172
Whorlton	Rev. A. W. Headlam	...	1	0	...	20·21	...
Gainford	A. Atkinson, Esq.	5	1	1	250 T	20·61	...
D Sedgefield	Dr. Smith	5	0	10	360 ⅄	19·67	175
D Hartlepool (Hurworth Burn)	T. Fenwick, Esq., C.E.	8	0	7	360	22·86	170
D ,, (Hart Reservoir)	,, ,, ,,	8	0	9	164	19·49	147
D Wolsingham	A. Mitchell, Esq.	5	1	0	464 ⅄	24·98	189
D Durham Observatory	J. J. Plummer, Esq.	12	4	6	335 ⅄	22·99	171
D ,, (S. Cuthbert's Col. Ushaw)	Rev. Dr. Gillow	5	0	10	600 ⅄	22·22	157
Seaham (Vicarage)	Rev. A. Bethune	5	0	4	80 T	20·27	101
Sunderland (West Hendon Ho.)	T. W. Backhouse, Esq.	5	1	0	132 ⅄	20·09	...
,, (,, ,,)*New gauge*	,, ,, ,,	5	1	0	132 ⅄	20·19	...
,, (St. Bede's Terrace)	J. W. Mounsey, Esq.	5	0	6	105 T	20·57	...
Chester-le-Street (Birtley)	Rev. R. F. Wheeler	5	0	10	205 ⅄	23·01	209
D Gateshead (Eighton Cottage)	T. Milnes Favell, Esq.	5	0	10	515 T	23·47	102
NORTHUMBERLAND.							
Allenheads	J. Lee, Esq.	8	0	4	1353 T	36·64	210
D Shotley Hall	Mr. J. Coulson	5	0	3	315 T	21·69	146
D Bywell	Mr. J. Dawson	8	0	6	87 T	24·00	225
D Wylam Hall	G. C. Atkinson, Esq.	10	4	0	96 ⅄	19·16	167
Haltwhistle (Unthank Hall)	Rev. Dixon Brown	5	0	9	380	30·17	193
D Newcastle (Rye Hill)	Robert Foster, Esq.	8	1	6	200	20·43	163

DIVISION X.—NORTHERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
NORTHUMBERLAND—(*con.*)						
Newcastle (Philos. Soc.)	W. Lyall, Esq.	8	1 5	105 T	19·02	...
D „ (Town Moor)	Mr. W. Neill	5	0 6	201 ⅄	20·35	166
North Shields (Wallsend)	J. W. Dees, Esq.	10	0 6	100 T	20·39	...
† „ (Rosella Place)	R. Spence, Esq.	8	1 0	126 ⅄	22·03	191
„ (Low Lights)	J. R. Procter, Esq.	8	3 4	22 ⅄	19·85	165
D „ (Tynemouth)	P. J. Messent, Esq.	5	2 8	65 ⅄	19·30	179
„ (Clementhorpe)	J. R. Procter, Esq.	5	1 0	150 T	19·20	184
* „ (Whitley)	Rev. R. F. Wheeler	5	3 0	82 ⅄	19·87	181
D „ („ Convalescent Ho.)	C. Roope, Esq.	...	1 0	50 ?	20·87	77
D „ (Earsdon)	John Taylor, Esq.	5	2 10	185 T	21·53	160
D Humshaugh	Rev. H. Taylor	...	1 0	230 ?	23·36	192
Stamfordham	Rev. J. F. Bigge	8	1 0	400 T	22·64	...
Newcastle and Gateshead W. Works — Whittle Dean	D. D. Main, Esq.	10	...	...	21·91	...
Hallington	„ „ „	10	0 6	469 ⅄	25·27	...
„ (Fawcett)	„ „ „	10	0 6	563 ⅄	22·77	...
North Tyne (Green Crag)	„ „ „	10	0 6	800 ⅄	27·13	...
„ „ (Valley)	„ „ „	10	0 6	300	22·86	...
Gunnerton Burn (Camphill)	„ „ „	10	0 6	676 ⅄	25·25	...
Swinburn (Woodford)	„ „ „	10	0 6	500 ⅄	24·77	...
D Hartburn (Wallington)	H. Laws, Esq, C.E.	5	1 0	398 ⅄	28·50	222
D Morpeth (Meldon Park)	Rev. R. F. Wheeler	5	1 0	...	24·93	185
Falstone	Mr. M. Hedley	5	3 0	...	40·92	...
Morpeth (Cresswell)	Rev. J. E. Leefe	...	1 0	96 T	18·92	...
D Kielder	Mr. W. Spence	5	1 6	673 T	45·74	158
Rothbury (Brenckburn Priory)	C. H. Cadogan, Esq.	5	1 0	250 T	25·73	125
Otterburn	Rev. T. Wearing	10	0 6	500	24·10	...
Deadwater	Mr. Scott	3	1 6	2000 T	63·00	...
D Alwinton (Harbottle)	T. Thompson, Esq.	5	1 0	500	28·10	106
Alnwick (Glanton Pyke)	F. W. Collingwood, Esq	8	4 4	534 T	23·42	...
D Howick	Earl Grey, K.G.	8	0 10	121 ⅄	23·44	101
Ilderton (Lilburn Tower)	E. J. Collingwood, Esq	10	6 0	300 T	23·88	...
Belford (Middleton Hall)	J. T. Leather, Esq. C.E.	10	2 0	240 ⅄	25·81	...
D Bamburgh (North Sunderland)	Rev. F. R. Simpson	8	1 2	69 T	23·10	202
*Wooler (Milfield)	G. A. Grey, Esq.	5	0 6	200 ⅄	24·78	...
CUMBERLAND.						
Whitbeck	Rev. T. Ormandy	2	1 0	...	38·59	...
Bootle Rectory	Rev. A. Wilkin	8	1 0	87 ⅄	38·54	187
Whitehaven (Braystones)	J. D. Watson, Esq	10	3 8	36 T	36·62	...
†Seathwaite ....(11)	Mr. Birkett	4	0 6	422 T	143·23	...
† „ ....*daily* (11)	„ „	5	1 0	422 T	146·53	203
D St. Bees	W. C. Hughes, Esq.	8	1 6	100 ?	39·73	159
†Wythburn Parsonage *monthly*(20)	Rev. Basil Lawson	8	1 0	574 T	96·00	...
†Watendlath ....(13)	G. J. Symons, Esq	8	1 0	867 T	82·25	...
D †Keswick (Barrow House) ...(46)	S. Z. Langton, Esq.	8	0 6	282 ⅄	68·91	225
Whitehaven (Millgrove) *monthly*	H. A. Fletcher, Esq.	8	3 0	215 T	38·96	...
D „ (The Barracks)	Capt. Morris Fawcett	5	1 0	21 ⅄	41·27	187
D Loweswater (Waterend)	Mrs. Jackson	5	0 8	432 T	55·34	172

DIVISION X.—NORTHERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground ft.	in.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
						inches.	
CUMBERLAND—(*con.*)							
†Hallsteads.....(36)	A. Marshall, Esq.	10	4	0	490 T	48·80	...
†Gowbarrow Fell .....(29)	G. J. Symons, Esq.	8	1	0	1100 T	58·25	...
†Ullswater (Watermillock) ...(37)	W. Rumney, Esq.	10	3	6	720 R	48·20	192
D†Keswick (Deer Close) .....(47)	H. C. Marshall, Esq.	7	1	9	300 T	55·72	208
D† „ (Derwent Island)..(14)	„ „ „	5	0	7	280 T	48·51	221
D† „ (Post Office) .....(16)	Mr. Crosthwaite	8	6	4	270 T	54·99	206
BA* „ „ ...(16)	„ „	5	1	0	270 T	53·26	...
† „ (Brow Top)	Mr. T. Barker	5	0	8	407 T	55·55	...
D† „ (Shu-le-crow)	H. Dawson, Esq.	12	3	0	278 T	53·70	188
†Skiddaw .....(18)	Mr. Nixon	8	1	0	1677	46·38	...
Penrith (Fell Lane)	T. Lester, Esq.	5	5	0	...	29·09	162
D „ (The Luham, Edenhall)..	G. Varty Smith, Esq...	5	1	1	270 T	26·32	185
DBlencowe School.....	T. Fawcett, Esq.	8	0	9	601 B	38·28	207
D†Bassenthwaite (Mirehouse).....	Mrs. Spedding	5	0	7	310 T	46·30	197
DCockermouth (Whinfell Hall) ...	W. Robinson, Esq. ...	5	2	0	265 R	50·24	208
Workington (Stainburn)	C. Litt, Esq.	8	0	6	101 R	35·26	192
Cockermouth	Dr. Dodgson	8	0	6	144 R	40·84	179
D „ (Higham)	T. A. Hoskins, Esq. ...	6	0	6	478 R	42·27	201
Maryport (Netherhall).....	H. P. Senhouse, Esq...	8	0	6	27 R	28·32	...
Wigton (Brayton)	Mr. J. Hammond	8	1	6	220	35·23	...
„ (Brookfield)	M. Lidbetter, Esq. ...	5	0	9	124	36·17	...
Alston (Nent Head)	T. G. Horder, Esq. ...	...	0	10	1450 T	44·81	210
Silloth (The Rectory).....	Rev. F. Redford.....	8	3	0	28 R	33·74	164
DCarlisle (Cemetery).....	Mr. T. Bell.....	8	0	8	114 R	30·37	178
„ (Scotby)	F. E. Sutton, Esq.....	8	5	5	140 T	27·11	...
D „ (Scaleby Hall).....	R. A. Allison, Esq. ...	8	1	0	112 R	36·62	191
WESTMORELAND.							
DKirkby Lonsdale (Casterton).....	S. Morris, Esq.	8	1	0	305 R	44·98	208
„ „ („ *monthly*)	„ „	8	1	0	305 R	44·41	...
„ „ (Biggins House)	Miss Tomlinson.....	12	3	6	400 ?	44·11	...
„ „ (Whelprigg) ...	Mrs. Gibson	5	4	6	475	44·98	...
„ „	Mr. W. Harrison	5	1	2	209	43·75	...
DChurchtown (Crosthwaite)	W. Garnett, Esq.	5	1	3	150 R	51·33	225
DKendal (Kent Terrace)	R. J. Nelson, Esq.....	5	1	6	146	49·37	184
„ (Highgate).....	E. Hayton, Esq.	8	5	0	180 T	48·99	208
D „ (Underfell)	J. J. Wilson, Esq.....	8	4	0	300 T	48·81	206
D „ „	„ „ „	8	4	0	300	51·04	203
D „ (Hawesmead)	G.Braithwaite,jn..Esq.	8	0	6	176 R	47·89	215
DStavely (Reston Hall)	T. K. Atkinson, Esq...	10	3	0	...	56·01	222
D†Bowness (Belsfield).....	H. W. Schneider, Esq.	5	4	0	160 R	56·81	215
„ (Matson's Grounds) ...	G. Healey, Esq.....	12	0	8	451 R	59·63	228
Windermere (High House)	E. Hayton, Esq.....	8	4	0	636 T	?49·63	...
D „ (The Wood).....	G. B. Crewdson, Esq..	8	3	2	322 R	61·37	209
Ambleside (Brathay Vic.)	Rev. H. S. Callender...	5	0	6	150 ?	77·34	213
Ravenstonedale (Brownber).....	J. Fothergill, Esq. ...	5	1	1	835 T	45·45	...
DLittle Langdale (Bridgend)..(49)	E. B. W. Balme, Esq..	...	0	9	385	100·20	212
DElterwater (Woodlands).....(50)	E. Tucker, Junr., Esq.	5	0	9	244 T	91·37	217

DIVISION X.—NORTHERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell.
WESTMORELAND—(*con.*)							
Ambleside (Lesketh Howe)...(26)	F. M. T. Jones, Esq....	5	2	6	175 T	85·00	...
D† Grasmere (High Close).....(22)	E. B. W. Balme, Esq...	8	0	9	553	80·42	223
*Kirkby Stephen	T. Mason, Esq.	5	1	0	574 T	32·26	169
† Kirkstone Pass.....(31)	G. J. Symons, Esq. ...	5	1	0	1500 T	103·10	...
† Grasmere (Easedale Tarn)...(45)	„ „ „	8	1	0	1175 T	104·00	...
† Haweswater(Mardale Green)(40)	„ „ „	8	1	0	800 T	86·75	...
† Crosby Ravensworth.....(55)	Rev. G. F. Weston ...	8	1	0	600 T	40·54	158
† „ „ (Reagill)(54)	Mr. W. Wilkinson ...	8	0	6	890 T	35·00	...
† Haweswater(Measandbecks) (41)	G. J. Symons, Esq. ...	8	1	0	1200 T	50·25	...
† Patterdale Hall ..... (33)	Mr. Rae	7	2	0	490 T	82·12	...
† „ (Greenside Mine).....	T. Taylor, Esq.	7	1	6	1000	91·91	...
D Appleby	Dr. Armstrong	8	1	0	442 T	29·03	175
Ullswater (Martindale) .....(52)	Rev. S. Golding	...	...		...	69·61	...
† „ (Swarth Fell).....(39)	G. J. Symons, Esq. ...	8	1	0	1000 T	42·50	...
„ (Sharrow Bay) *monthly*(38)	A. Parkin, Esq.....	5	0	7	500	40·21	...
„ („ „)	„ „ „	8	1	6	500	35·25	...
† Great Strickland [Penrith] (44)	H. Plumer, Esq.....	5	1	0	650 T	31·48	204
† Brougham Hall [Penrith].....	Mr. G. Campbell	5	5	5	470 T	27·86	153

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS.

MONMOUTH.							
*Llanfrechfa Grange	F. J. Mitchell, Esq. ...	5	4	0	326 ⅄	41·43	140
D Chepstow (Tutshill)	J. G. Wood, Esq.	8	3	6	200 T	32·89	133
D „ (Piercefield Park).....	H. Clay, Junr., Esq....	5	1	6	300 ?	36·74	162
D Tintern Abbey.....	Mr. W. Bowen	5	1	0	16	38·97	174
Tredegar (Ebbw Vale)	R. Jordan, Esq.....	5	1	0	918	56·77	181
„ (Sirhowy)	J. N. James, Esq.....	5	1	0	1088	49·25	152
Monmouth (Dingestow).....	S. R. Bosanquet, Esq.	5	1	0	250 ?	29·07	...
D Abergavenny	Dr. McCullough	5	1	0	220 B	31·79	180
GLAMORGAN.							
*Cowbridge (The Ham)	G. W. Nicholl, Esq ...	8	1	3	50 ?	32·86	115
„ (Ash Hall)	D. Owen, Esq.	8	1	0	160 ?	44·54	162
D Cardiff (Cemetery)	T. Waring, Esq., C.E.	5	1	0	90 ⅄	41·30	180
„ (Ely)	T. G. South, Esq. C.E.	5	3	0	45	38·43	173
D „ (Crockherbtown)	W. Adams, Esq.	5	1	0	35 ⅄	32·90	179
D „ (Pentyrch)	F. G. Evans, Esq.....	5	1	1	100 T	44·34	204
„ (Lisvane)	T. G. South, Esq. C.E.	5	2	0	142	37·51	176
D Swansea (South Dock Lock).....	J. W. James, Esq.....	12	14	9	40 ⅄	31·24	183
Neath	E. R. Morgan, Esq. ...	5	1	0	...	49·28	184
D Felindre (Lliw Reservoir)	E. Cousins, Esq., C.E.	8	3	0	420	50·94	161
D Aberdare (Treherbert)	W. T. Lewis, Esq. C.E	5	1	0	634 ⅄	84·59	216
D „ (Mardy)	„ „ „	5	1	1	431 ⅄	57·89	190
D „ (Abernant)	E. Jones, Esq.	5	1	0	425 T	52·68	115
Merthyr Tydfil (Thomas Town)...	T. J. Dyke, Esq.....	5	4	0	550 ⅄	46·06	177
D Ystalyfera	Dr. D. Thomas	8	1	2	250 ?	61·13	161

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
CARMARTHEN.						
D Carmarthen (Gaol)	G. Stephens, Esq.	8	0 6	92 ⅄	44·04	195
D „ (Joint Co. Asylum)	Dr. Hearder	8	0 6	185	45·78	208
Dynevor Castle	Miss W. L. Hall	...	...	236 T	44·88	202
Narberth (Tegfynydd)	H. S. Morgan, Esq.	5	1 0	158	48·43	160
PEMBROKE.						
Tenby (Ivy Tower)	John Leach, Esq.	5	1 0	180	42·75	220
D*Haverfordwest (High Street)	E. P. Phillips, Esq.	5	1 0	95 T	45·67	193
Solva	E. Robinson, Esq.	5	1 0	100 ?	28·55	...
BALlechryd (Castle Malgwyn)	Mr. W. Hutchison	5	1 2	50	36·66	...
CARDIGAN.						
Lampeter (St. David's College)	Prof. Scott	8	5 0	420	29·52	162
Aberystwith (Goginan) (58)	H. Trenwith, Esq.	5	2 6	290	41·32	205
BRECKNOCK.						
Crickhowell (Glanusk Park)	Mr. Ireland	8	0 6	300 ?	40·95	...
D Brecknock (Watton)	J. Kirk, Esq.	5	2 0	437 ⅄	36·42	142
„ (Watton Mount)	George Overton, Esq.	5	4 6	450 T	35·15	...
D Llanwrtyd	Mr. Kelland	5	1 10	763	?51·70	169
RADNOR.						
D*Presteign	Captain Hannam	5	1 0	550 T	29·77	205
D Rhayader (Nantgwillt) (70)	R. L. Lloyd, Esq.	...	1 0	...	53·30	232
D† „ (Cefnfaes) (62)	Mrs. Jones	5	2 0	880 ⅄	38·57	186
D† Heyhope Rectory	Rev. W. W. Griffith	5	1 0	690 T	35·82	176
MONTGOMERY.						
†Llanidloes (Ystrad-olwyn-fawr)	Mr. J. Jones	8	1 0	950	48·50	...
†Llanidloes (Dolenog) (69)	T. F. Roberts, Esq.	5	2 0	550 T	42·77	177
D Newtown (Dolfor)	W. B. Pugh, Esq.	5	0 3	1027	39·94	199
†Carno (Capel) (54)	Mr. T. Bound	8	1 0	550 T	47·60	...
D Machynlleth (Plas) (67)	Mr. Johnstone	5	1 0	...	57·00	225
†Garthbibio (Lluest fawr) (49)	Mr. J. Jones	8	1 0	990 T	65·10	...
FLINT						
Treiddyn (Nant-y-ffrith)	T. V. Kyrke, Esq.	5	1 0	850	31·08	...
Wrexham (Broughton Ho.)	W. Johnson, Esq.	...	5 0	35	22·25	...
Mold (Bryn Alyn)	Rev. R. B. Cooke	5	1 2	483 ⅄	24·90	...
†Hawarden [Chester]	Dr. Moffat	8	0 4	270	25·07	164
Holywell (Maes y dre)	J. Williams, Esq.	10	5 0	400	20·12	...
St. Asaph (Nantllys) (33)	P. P. Pennant, Esq.	5	1 0	273 B	23·05	...
DENBIGH.						
D Ruabon (Wynnstay)	Mr. Middleton	12	3 0	484	31·63	199
Wrexham (Plas Power)	Mr. J. Clark	5	1 0	472 ⅄	29·33	180
„ (Brymbo)	C. E. Darby, Esq.	6	6 3	632 L	25·83	...

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(*continued*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.	Days on which ·01 or more fell.
DENBIGH—(*con.*)							
D Rosset (Trevalyn Hall)	Capt. Griffith	5	1	0	58 ⅄	22·20	187
D Llannerch [St. Asaph]	Whitehall Dod, Esq.	5	1	0	107 ⅄	25·18	182
D „ [„]	Mr. Cartwright	...	1	0	129	26·14	181
MERIONETH.							
*Dolgelly (National School) ...(21)	Major Mathew	5	1	0	43	55·20	223
ℬ* „ (Brithdir) ...(28)	J. Hill, Esq.	5	1	6	500 ?	62·79	...
Bala ...(20)	Major Mathew	5	1	0	544	42·77	203
Trawsfynydd ...(4)	„ „	5	0	7	700	59·52	222
*Rhiw brifdir ...(15)	„ „	5	10	0	1100	97·89	264
CARNARVON.							
D Aberdaron (Sarn) ...(22)	Mr. W. Jones	12	5	0	356 ⅄	39·26	198
*Pwllheli (Bodfaen) ...(17)	Major Mathew	5	4	9	80	36·66	193
*Llanystumdwy (Talarvor) ...(16)	„ „	5	3	0	50	23·55	174
*Llangybi (Cefn) ...(6)	„ „	5	1	1	200	42·05	189
*Port Madoc ...(1)	„ „	5	3	0	10	41·20	185
Beddgelert (Bryn Gwynant) (66)	J. Wyatt, Esq.	9	3	0	264 B	107·94	200
*Llanllyfni (Cilgwyn) ...(13)	Major Mathew	5	1	0	900	46·81	165
Carnarvon (Cocksidia) ...(39)	„ „	5	1	1	120	34·33	220
*Bethesda (Penrhyn Quarry) (11)	„ „	5	5	0	1000	53·01	231
„ (Brynderwen) ...(12)	„ „	5	1	0	550	48·79	222
†Llanfairfechan ...(26)	R. Luck, Esq.	5	0	8	150 B	34·34	146
D†Llandudno (Warwick House) (29)	Dr. Nicol	8	0	8	99 ⅄	26·48	167
„ (Great Orme's Head) (64)	R. Price, Esq.	12	6	0	175 ?	23·52	...
ANGLESEA							
Menaifron ...(23)	Rev. W. W. Williams	5	4	9	17 L	36·68	200
D Bodewryd	„ „ „	5	1	6	180 B	34·07	222
ISLE OF MAN.							
D Douglas (Derby Square)	P. Killey, Esq.	5	1	1	88 L	33·77	193
D ℬ Kirk Michael	Rev. W. C. Ingram	5	1	0	100?	25·94	180
JERSEY.							
D Millbrook	P. Langlois, Esq.	5	1	0	50	32·65	182
GUERNSEY.							
Guernsey (York Place)	Dr. Hoskins, F.R S.	12	12	0	204 B	37·72	177
D „ (Grange Road)	Dr. Mansell	5	1	0	174 B	39·88	192
SARK.							
D Sark Parsonage	Rev. T.L.V. Cachemaille	5	1	0	340 L	33·25	194

SCOTLAND.

DIVISION XII.—SOUTHERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
WIGTOWN.						
Mull of Galloway	Bd. of Northern Lights	...	...	...	16·56	98
D BA*Wigton (N. Balfern)	T. MacLelland, Esq...	5	0 11	75 ⅄	36·34	182
Kirkcowan	A. Buchan, Esq.	...	...	...	46·28	...
Corsewall	Bd. of Northern Lights	...	3 4	22 ?	28·58	138
KIRKCUDBRIGHT.						
Little Ross	Bd. of Northern Lights	...	3 3	130 ?	23·83	131
Twynholm (Cally)	A. Buchan, Esq.	5	...	90	42·70	...
BA*Dalbeattie	J. Grieve, Esq.	5	0 8	60 ?	43·86	201
Castle Douglas (Slogarie)	Mr. J. Hastings	4	0 9	800	52·66	...
D Cargen [Dumfries]	P. Dudgeon, Esq.	3	0 4	80 ⅄	43·52	168
Irongray (Drum Park)	*Dumfries Courier*	...	...	...	57·74	...
D New Galloway	R. McKay, Esq.	8	20 0	220 ⅄	48·33	203
D BA*Carsphairn	J. Hannah, Esq.	5	3 10	574 T	57·02	154
DUMFRIES.						
D New Abbey, St. Mary's	Rev. W. Downie	...	0 4	54	50·06	120
Kelton House	J. Fletcher, Esq.	8	1 3	100	38·75	...
Annan (Warmanbie)	Mr. Elliot	8	3 0	100	38·05	170
D Dumfries (Crichton Asylum)	Dr. Gilchrist	8	0 6	159 T	44·24	187
D ,, (March Hill Cott.)	Mr. T. Hogg	5	1 0	70 T	37·01	203
Canobie (Byreburnfoot)	J. Little, Esq.	3	0 6	140 T	48·10	...
Langholm School	,, ,,	3	0 6	270 ⅄	60·00	...
Westerkirk School	,, ,,	3	0 6	420	57·50	...
,, (Carlesgill)	,, ,,	9	1 6	307 T	57·80	...
Ewes School	,, ,,	3	0 6	407 T	52·35	...
,, (Burnfoot)	,, ,,	3	0 6	480	55·40	...
Closeburn (Wallace Hall)	C. T. Ramage, Esq.	3	9 6	207 T	37·90	...
D Kirkpatrick Juxta (Broomlands)	Mr. Burgess	3	0 3	146	63·77	163
Durrisdeer (Drumlanrig Castle)	A. Buchan, Esq.	...	...	191	52·15	...
D Sanquhar (Wanlockhead)	Mr. G. Dawson	3	0 4	1330 T	71·92	...
ROXBURGH.						
New Castleton (The Flatt)	J. Elliot, Esq.	3	0 9	350 T	52·40	...
,, ,, (Kirndean)	Miss Elliot	3	0 6	400 T	47·20	...
D Riccarton	Rev. R. F. Wheeler	5	1 3	853	48·17	198
D Saughtree	,, ,, ,,	5	4 6	760 T	42·03	183

DIVISION XII.—SOUTHERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
ROXBURGH—(*con.*)						
Hawick (Wolfelee)	A. Buchan, Esq.	5	...	604	39·29	...
„ (Goldielands)	Prof. Elliot	3	0 8	500	33·97	...
„ (Kirkton)	Mr. J. Welsh	...	1 0	759 ⅄	35·60	...
D* „ (Sillerbut Hall)	Mr. D. Elder	5	4 0	512 ⅄	30·91	192
*Jedburgh (Sunnyside)	G. Hilson, Jun., Esq.	5	10 0	360 ⅄	26·25	145
St. Boswell's (Elliston)	G. Dalrymple, Esq.	...	...	360	29·82	...
Kelso (Abbey Park)	A. Buchan, Esq.	...	...	...	24·73	...
„ (Springwood Park)	Sir G. Douglas, Bt	10	1 0	130	22·25	150
D Melrose (Dingleton Mains)	Miss Turnbull	5	5 0	500 ?	28·87	178
„ (Abbey Gate)	Mr. A. Dodds	5	0 6	280	31·16	...
D Wooplaw [Galashiels]	J. Murray, Esq.	5	0 9	880 ⅄	32·56	213
„ „	„ „	3	1 0	880 ⅄	32·15	213

DIVISION XIII.—SOUTH-EASTERN COUNTIES.

SELKIRK.						
Borthwickbrae [Hawick]	A. E. Lockhart, Esq.	8	0 2	800 T	40·90	...
Bowhill	A. Buchan, Esq.	9	11 0	537	32·60	168
Galashiels (Abbotsford Rd.)	Dr. Somerville	5	0 6	416 ⅄	30·68	209
PEEBLES.						
D Glenrath	Mr. S. Linton	5	1 2	764 ⅄	36·09	170
Cairnmuir	A. Buchan, Esq.	12	0 5	1150	51·25	...
D Penicuick (N. Esk-Reservoir)	Mr. J. Garnock	11	0 6	1150 ⅄	37·85	140
BERWICK.						
Milne Graden	A. Buchan, Esq.	...	...	103	20·60	183
D Coldstream (Swinton Manse)	Rev. R. Home	5	0 10	200 ⅄	29·63	175
D Marchmont House	Mr. P. Loney	5	1 0	500 T	36·49	204
D Lauder (Thirlestane Castle)	Mr. J. Whitton	3	0 3	558 T	25·30	...
Dunse (Mungo's Walls)	Mr. J. Thomson	3	0 6	267	27·83	178
„ (Feindhill)	A. Buchan, Esq.	8	0 6	500	36·01	...
St. Abb's Head	Bd. of Northern Lights	...	0 4	211 ?	22·74	104
HADDINGTON.						
Yester	A. Buchan, Esq.	12	1 0	425	29·78	...
Haddington (Millfield)	Mr. T. Dods	6	4 0	140 T	26·28	...
Tranent (Tyneholme)	A. Buchan, Esq.	...	...	284	26·45	...
Dunbar (Thurston)	„ „	6	4 0	327	27·70	177
D East Linton	Mr. J. Storie	3	0 3	90 T	29·12	170
North Berwick (Seacliffe)	A. Buchan, Esq.	8	5 0	80	27·17	...
EDINBURGH.						
Cobbinshaw Reservoir	A. Buchan, Esq.	6	0 7	863	38·80	...
D Glencorse	W. H. Cameron Esq. C.E.	...	0 6	787	36·50	151
Harlaw	„ „ „	...	...	...	36·10	...

DIVISION XIII.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which 01 or more fell.
			ft. in.	feet.	inches.	
EDINBURGH—(*con.*)						
Clubbiedean	W.H.CameronEsq.C.E.	...	...	...	35·21	...
Swanston	„ „ „ ...	...	0 6	555	33·55	...
Colinton (Fernielaw)	J. Leslie, Esq., C.E. ...	11	0 6	500	31·10	...
†Dalkeith	A. Buchan, Esq.	4	0 4	183	24·88	111
Ratho (The Villa)	T. Sheriff, Esq.	...	...	...	28·01	...
„ (Bonnington)	„ „ „	3	4 0	405	31·00	...
DInveresk	Mr. McAuslane	9	2 0	60 T	28·08	152
Edinburgh (Princes St.)	A. Buchan, Esq.	6	7 6	220	28·24	...
„ (Charlotte Square)...	J. Leslie, Esq., C.E. ...	11	0 6	230	28·19	...
„ („ „)...	„ „	12	63 0	300	22·03	...
Costorphine (Meadowfield)	A. Paterson, Esq.	8	9 4	155 T	25·84	...
LINLITHGOW.						
Linlithgow (Rockville)	A. Buchan, Esq.....	5	0 4	...	32·57	...
Abercorn	Rev. D. Playfair	5	0 10	130	26·35	...

DIVISION XIV.—SOUTH-WESTERN COUNTIES.

LANARK.						
Biggar (Wiston)	Mr. W. Core	3	0 0	860	47·50	...
D „ (Cambus Wallace)	Captain Paul.....	6	0 6	748 T	33·01	206
Douglas (Newmains)	Mr. J. Russell	3	0 4	783 ⅄	50·25	172
DLanark (Baronald)	Captain Thornton	5	1 0	505 ⅄	34·64	178
D „ (Ridge Park)	C. Lindsay, Esq.....	5	0 4	634 ⅄	36·23	171
DCarnwath	Mr. W. Currie	3	0 1	700 ⅄	36·63	177
Hamilton (Auchinraith)	R. Ker, Esq.	10	4 9	150 ?	32 07	...
„ (Bothwell Castle)	Mr. A. Turnbull	10	18 0	146 T	32·34	166
Cambuslang (Bushy Hill)	Dr. Muirhead	6	0 10	147 ⅄	39·51	182
DGlasgow (Cessnock Park)	R. Hart, Esq.....	10	4 4	29 ⅄	38·34	207
„ (Observatory)	Professor Grant,F.R.S.	5	0 1	180 ⅄	43·52	222
DBaillieston	Mr. P. Jarvie.....	6	0 3	230 T	?52·45	215
AYR.						
DGirvan (Pinmore)	Hugh Hamilton, Esq..	5	1 0	187 T	45·24	190
„	A. Buchan, Esq.	...	...	33	52·25	...
DPatna (Hole House)	Mr. P. Murdoch	5	1 0	446 ⅄	42·86	179
DNew Cumnock (Whitehills)	W. Lennox, Esq.	5	1 0	860 ⅄	50·28	204
Ayr (Auchendrane House)	A. Buchan, Esq.	...	...	97	44·76	206
DOld Cumnock	J. Ballantine, Esq	5	1 3	380 ⅄	43·16	207
DMuirkirk (Irondale House)...	J. Wilson, Esq.....	5	1 0	745 ⅄	56·56	197
Kilmarnock (North Craig)	J. M. Gale, Esq., C.E.	12	0 6	310	43·13	...
„ (Annanhill)	W. H. Dunlop, Esq. ..	10	4 0	175 ⅄	39·60	211
Largs (Mansfield)	Mr. McMaster	10	0 6	30	44·60	...
Skelmorlie (Morland)	A. Buchan, Esq.	...	...	100	57·10	...

DIVISION XIV.—SOUTH-WESTERN COUNTIES—(*continued*).

STATION.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
RENFREW.						
Mearns (Newton)	P. R. Murdoch, Esq....	5	1 0	350	51·75	...
Gorbals's Dist. Ryat Lynn	‡Glasgow Water Works	8	0 5	310	52·20	173
Gorbals's Dist. Waulk Glen	,, ,, ,,	12	0 5	280	51·40	173
Gorbals's Dist. Middleton	,, ,, ,,	12	0 5	550	62·70	...
Gorbals's Dist. Nither Cairn	,, ,, ,,	...	...	...	66·25	...
Paisley W. Works Stanely Reservoir	Robert Sharp, Esq. ...	12	1 0	190	46·56	...
Paisley W. Works Back Thornlymuir	,, ,, ...	...	1 0	646	57·56	...
Paisley W. Works Muirhead	,, ,, ...	11	1 0	482	50·50	...
Paisley W. Works Springside	,, ,, ...	11	1 0	532	56·07	...
Paisley (Fergusliе House)	Mr. A. Leishman	3	0 3	85	44·40	146
Port Glasgow (Kilmalcolm)	D. Macdonald, Esq. ...	5	0 7	290 T	61·53	136
Shaws W. Works (Loch Thom)..	J. Wilson, Esq., C.E...	6	1 0	643 ⩛	69·20	...
,, ,, (Spango Burn)	,, ,, ...	6	0 9	757 ⩛	63·60	...
D Greenock (Hole Glen)	,, ,, ...	...	1 0	603 ⩛	64·73	233
,, (Glenbrae)	,, ,, ...	6	0 9	574 ⩛	67·90	...

DIVISION XV.—WEST MIDLAND COUNTIES.

DUMBARTON.						
D Cardross (Kilmahew Castle)	J. W. Burns, Esq.....	8	0 6	96 ⩛	44·31	207
Auchendennan	A. Buchan, Esq.	...	...	...	56·30	...
Helensburgh	J. M. Gale, Esq., C.E.	...	...	295	46·65	175
Loch Lomond (Cameron House).	A. Buchan, Esq.....	6	...	47	64·40	...
,, ,, (Balloch Castle)...	A. J. D. Brown, Esq...	7	0 4	91 ⩛	?54·99	223
,, ,, (Firkin)	A. McDowall, Esq. ...	3	0 6	100	93·50	...
Loch Long (Arddaroch)	J. White, Esq.	5	0 10	80	76·46	...
B ,, (Arrochar)	Rev. J. Dewar	5	0 9	10	86·31	...
STIRLING.						
Strathblane (Mugdock Reservoir)	Glasgow Water Works	8	0 6	320	46·00	115
Park Hall	A. Buchan, Esq.	...	...	...	34·58	...
Falkirk (Kerse)	Earl Zetland, K.T. ...	8	1 0	...	34·45	...
,, (Arnott Hill)	A. Buchan, Esq.....	5	1 6	135	39·80	...
Stirling (Polmaise Gardens).. ...	Mr. Gorrie	6	0 9	12	38 50	...
Bridge of Allan	A. Buchan, Esq.	...	...	...	39·10	...
Ben Lomond	Glasgow Waterworks..	...	...	1800	87·50	...
BUTE.						
Arran (Pladda)	Bd. of Northern Lights	...	3 3	55 ?	41·90	171
B ,, (Brodick)	Rev. D. Taylor	5	1 0	19	69·32	...
B ,, (Sannox Manse)	Rev. J. Blacklock	5	0 7	14 L	73·45	...

‡ Information supplied by J. M. Gale, Esq., C.E.

DIVISION XV.—WEST MIDLAND COUNTIES—(*continued*).

STATION.	AUTHORITIES.	Rain Gauge. Diameter	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea level	Depth of Rain. 1873	Days on which '01 or more fell
			ft. in.	feet.	inches.	
ARGYLL—(MAINLAND.)						
Castle Toward	Mr. Scath	6	4 0	65	49·65	...
Lochgilphead (Kilmory) *Thom's g.*	Sir J. P. Orde, Bart	6	0 4	100	59·70	...
,, (,,)	,, ,, ,,	5	0 4	100 ?	62·19	214
D ,, (Auchnaba)	Captain Orde	5	1 0	40	54·37	257
D ,, (Callton Môr)	Mr. J. Russell	3	4 0	65	57·15	245
Inverary Castle	Mr. J. Caie	4	0 2	30	72·00	...
B Dalmally	J.B.Lawes,Esq.,F.R.S.	5	...	...	84·09	...
,, (Bridge of Orchy)	A. McDowall, Esq.	3	0 6	700 ?	128·50	...
B Loch Awe	J. B. Lawes, Esq. FRS	5	...	...	67·72	...
Appin (Aird's)	R. Mactic, Esq.	6	0 5	15 ?	55·50	...
,, (,,)	,, ,,	5	0 5	15	58·40	...
Glen Etive	Mr. A. McDonald	...	...	...	90·89	...
Loch Eil (Corran)	Bd. of Northern Lights	...	0 4	14 ?	77·15	123
D Loch Sunart (Glenborrodale)	J. J. Dalgleish, Esq.	5	0 2	50 L	55·84	205
Ardnamurchan	Bd. of Northern Lights	...	3 6	82 ?	47·34	191
ARGYLL—(INSULAR.)						
Cantire, Mull of	Bd. of Northern Lights	...	...	279 ?	38·43	114
,, (Campbeltown Devaar)	,, ,, ,,	...	3 4	75 ?	42·58	172
,, (Skipness Castle)	Mrs. Graham	6	1 6	20 L	47·80	...
D ,, (Tarbert, Stonefield)	Colin G. Campbell, Esq.	3	1 3	90	69·55	181
Islay (Rhinns)	Bd. of Northern Lights	...	3 0	74 ?	36·18	174
,, (Lochindaul)	,, ,, ,,	...	...	...	47·28	146
D* ,, (Eallabus)	R. Ballingal, Esq.	5	1 0	71 L	44·06	220
,, (Bowmore)	D. M. Bean, Esq.	5	1 0	30	49·85	236
,, (McArthurshead)	Bd. of Northern Lights	...	...	...	32·22	126
D ,, (Gruinart School House)	Mr. D. Mac Gilp,	5	1 0	120 ?	42·48	201
Jura (Lowlandmansbay)	Bd. of Northern Lights	...	...	...	49·90	196
,, (Fladda)	,, ,, ,,	...	...	...	69·30	170
Lismore (Mousedale)	,, ,, ,,	...	3 4	37 ?	41·21	171
Mull (Dhuheartach)	,, ,, ,,	..	...	...	23·78	132
,, (Calgary)	A. Buchan, Esq.	..	...	...	77·00	...
,, (Glengorm)	Miss Forsyth	6	0 9	255	51·20	...
,, (,,) *new gauge*	,, ,, ,,	6	0 6	250	57·74	203
,, (Sound of Mull)	Bd. of Northern Lights	...	0 6	12 ?	75·60	168
Tyree (Hynish)	,, ,, ,,	...	...	...	63·27	173
D B* ,, (Heynish Farm)	L. Macquarie, Esq.	5	0 9	60 B	42·14	209

DIVISION XVI.—EAST MIDLAND COUNTIES.

KINROSS.						
Loch Leven Sluice	W. Tullis, Esq.	...	0 10	...	34·00	...
FIFE.						
D Burntisland	Rev. G. H. Forbes	...	...	...	28·15	168
Dunfermline (Craigluscar)	W. Chisholm, Esq.	10	0 10	650	38·10	...
D Beath (Outh)	L. Dalgleish, Esq.	5	0 2	890 T	41·43	139

DIVISION XVI—EAST MIDLAND COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
FIFE—(*con.*)						
D Leven (Nookton)	W. McG. Miller, Esq.	5	0 6	80 ⅄	28·70	200
D Balfour	Mr. J. Dewar	3	0 6	127 ⅄	27·33	157
Falkland (Lothrie Reservoir)	A. Buchan, Esq.	...	...	...	35·22	...
Isle of May	Bd. of Northern Lights	...	2 2	182 ?	23·45	72
St. Andrews (Cambo House)	Sir T. Erskine, Bt.	3	0 8	50 T	25·70	...
,, (Feddinch Mains)	Mr. Muirhead	3	1 0	300 T	28·60	132
,, ...	A. Buchan, Esq.	11	0 6	...	31·01	...
D BA Auchtermuchty	Dr. Troup	5	1 0	179 ⅄	31·87	194
Kilmany (Mountquharrie House)	A. Buchan, Esq.	...	...	...	27·40	...
D Cupar (Birkhill)	Mrs. Wedderburn	5	0 5	130 B	27·82	204
PERTH.						
D Culross (West Grange)	J. J. Dalgleish, Esq.	5	0 2	116 ⅄	37·44	129
Menteith (Cardross Ho.)	H. D. Erskine, Esq.	8	4 6	120 L	42·80	...
Aberfoyle	Glasgow Water Works	8	0 6	60	61·10	...
Ledard	,, ,, ,,	...	...	1500	61·80	167
Dunblane (Kippenross)	J. Stirling, Esq.	6	0 4	150	36·75	...
D Deanston House	Mr. Henderson	6	1 0	130 ⅄	43·35	225
Loch Dhu	Glasgow Water Works	8	0 6	325	80·00	179
,, Drunkie	,, ,, ,,	8	0 6	420	64·30	...
,, Vennachar	,, ,, ,,	8	0 6	275	58·00	159
Lanrick Castle	A. Glover, Esq.	3	0 6	...	50·60	143
Bridge of Turk	Glasgow Water Works	8	0 6	270	74·50	...
Loch Katrine (Tunnel Hill Top)	,, ,, ,,	8	0 6	830	74·20	...
Callander (Leny)	J. B. Hamilton, Esq.	3	0 4	340 ⅄	62·20	...
,, (The Gart)	A. Buchan, Esq.	...	...	...	60·46	...
Between Glen Finlas & Ben Ledi	Glasgow Water Works	8	0 6	1800	55·40	...
Glen Gyle	,, ,, ,,	...	...	380	95·60	...
Orchill	A. Buchan, Esq.	...	...	...	36·30	...
Auchterarder House	Mr. Maclean	8	2 3	162	27·14	...
,, (Colquhalzie)	Mr. R. Morton	8	0 5	150 ?	35·54	...
D ,, (Trinity Gask)	Mr. R. Wylie	3	0 1	133 ⅄	34·44	153
Loch Earnhead	A. Buchan, Esq.	3	0 4	460	64·95	...
D BA Strathfillan	Rev. A. Mackinnon	5	...	700	87·54	158
Crieff (Ochtertyre)	A. Buchan, Esq.	...	...	...	41·54	...
Perth Academy	Dr. Miller, F.R.S.E.	15	64 5	83 ⅄	22·04	...
,, (Inchbank)	,, ,,	10	1 6	24 ⅄	28·32	...
,, (General Prison)	A. Buchan, Esq.	...	...	48	30·26	159
Scone Palace	Mr. J. Halliday	6	2 6	80 L	25·15	133
D BA Dunkeld (H.R.S.)	The Station Agent	5	1 0	225	37·71	169
Meigle (Belmont Castle)	Mr. J. Davidson	8	37 0	237	24·70	98
,, (Arthurstone)	P. Carmichael, Esq.	5	1 0	187 ⅄	26·68	...
,, ,, *new gauge*	,, ,,	5	2 3	196	26·58	...
Aberfeldy (Blackhill)	Mr. A. McArthur	3	0 10	820	47·40	...
D BA ,, (H.R.S.)	The Station Agent	5	...	...	32·59	
BA* Logierait (Strath-tay)	Rev G. D. R. Munro	5	1 0	313 ⅄	31·09	177
D BA Pitlochrie (H.R.S.)	The Station Agent	5	1 1	332	32·24	147

DIVISION XVI.—EAST MIDLAND COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
PERTH—(*con*).						
Pitlochrie (Bonskeid)	A. Buchan, Esq.	...	...	...	37·16	...
D BA Struan (H.R.S)	The Station Agent	5	1 0	800	36·81	...
D BA Dalnaspidal (H.R.S.)	,, ,, ,,	5	1 0	1450	66·09	216
FORFAR.						
D † Dundee (Westfield Cottage)	C. Clark, Esq.	5	5 6	50 T	28·04	200
D † ,, (Eastern Necropolis)	Mr. W. R. McKelvie	3	0 5	167 T	28·40	136
D † Craigton (*daily*)	‡Dundee Water Works	5	0 3	481	39·91	137
† ,, (*monthly*)	,, ,, ,,	11	0 3	481	35·57	...
† Crombie Reservoir	,, ,, ,,	11	0 3	522 T	35·16	...
D Kettins	Mr. J. Gibb	4	1 0	218 ⊼	30·11	154
† Hill Head (*monthly*)	Dundee Water Works	11	0 3	570 T	34·90	...
D Arbroath	A. Brown, Esq., LL.D.	8	2 0	60 T	28·95	162
Montroseness	Bd. of Northern Lights	...	...	...	26·02	99
Montrose (Bridge Street)	J. Scott, Esq.	8	0 3	25 T	28·63	...
,, (Museum)	Mr. J. Campbell	7	29 0	37	?24·68	103

DIVISION XVII.—NORTH EASTERN COUNTIES.

KINCARDINE.						
Lawrencekirk (Johnstone Lodge)	A. Buchan, Esq.	5	...	382	30·57	...
The Burn [Brechin]	Col. McInroy	6	0 4	235 T	33·30	153
Fettercairn	A. C. Cameron, Esq.	3	0 3	230 ⊼	35·65	204
,, (Arnhall)	J. Vallentine, Esq.	6	0 2	240	31·10	125
Girdleness [Aberdeen]	Bd. of Northern Lights	...	4 7	86	23·35	98
ABERDEEN.						
D Braemar	Mr. J. Aitken	8	0 9	1114 T	42·78	206
Drumoak (Drum Castle) *monthly*	Mr. G. Gammie	5	1 8	275 ⊼	38·64	...
Cromar (Logie Coldstone School)	Rev. J. G. Michie	5	4 0	608 ⊼	33·34	218
D ,, (,, ,, Manse)	Rev. G. Davidson	5	1 0	694 ⊼	32·38	223
,, (,, ,, Loanhead)	A. Farquharson, Esq.	5	1 0	743 ⊼	30·45	220
,, (Tillypronie)	A. Buchan, Esq.	...	...	1120	32·20	...
Aberdeen (Pitmuxton)	Mr. J. Taylor	10	1 4	14	31·98	273
† ,, (Rose Street) *new gauge*	A. Cruickshank, Esq.	5	0 5	95 T	31·28	...
* ,, (Grammar School)	Rev. A. Beverley	5	4 8	98 ⊼	32·67	...
,, (,, ,,)	,, ,, ,,	5	8 3	103 ⊼	30·43	...
,, (,, ,,)	,, ,, ,,	5	63 10	161 ⊼	31·55	...
,, (Skene Street)	,, ,, ,,	5	2 0	95 ⊼	31·96	...
D Midmar (Blackstock)	Mr. J. Barron	5	0 8	570 T	33·69	183
Lumphanan (Corse House)	Mr. J. Berry	5	3 0	833 T	36·11	...
Monymusk (Cluny Castle)	Mr. McDonald	5	0 0	280 ⊼	29·68	138
D BA* Alford (Bogside, Leochel C.)	W. Bruce, Esq.	5	3 0	882 ⊼	35·19	191

‡ Information supplied by J. Watson, Esq.

DIVISION XVII.—NORTH EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground ft.	in.	Height Above Sea Level feet	Depth of Rain. 1873 inches.	Days on which .01 or more fell.
ABERDEEN—(*con.*)							
Inverury (Kenmay)	Rev. G. Peter	8	0	3	300	34·11	...
„ („)	„ „	8	0	7	300	32·19	...
„ (Manse)	Rev. J. Davidson	9	0	0	220 ⅄	33·82	...
Ellon (Tillydesk)	W. Hay, Esq.	11	0	4	349 ⅄	32·37	...
Peterhead (Buchanness)	Bd. of Northern Lights	...	...		...	23·98	...
„ ...	A. Buchan, Esq.	...	...		...	29·62	...
D Old Deer	J. Walker, Esq.	5	2	0	135 ⅄	32·96	217
„ „ (Manse)	Rev. J. Peter	8	0	6	146 ⅄	31·41	...
Turriff (New Byth)	A. Henderson, Esq.	5	0	5	391 ⅄	37·81	...
D New Pitsligo	Mr. D. Sturrock	3	0	3	501 ⅄	36·40	207
Kinnairdhead	Bd. of Northern Lights	...	3	4	64?	35·40	139
BANFF.							
D BA Tomintoul	Mr. R. Dey	5	1	0	1100 ⅄	32·38	195
BA Keith (H.R.S.)	The Station Agent	5	1	0	364	35·17	...
Gordon Castle	Mr. Webster	8	1	6	70	32·31	...
ELGIN OR MORAY.							
Grantown	Mr. W. Duncan	5	1	1	712 ⅄	34·28	225
D Rothes (Wester Elchies)	J. Gavin, Esq.	8	1	3	607 ⅄	34·06	213
D BA Forres (H.R.S.)	The Station Agent	5	1	0	20	29·83	172
Elgin (Ashgrove)	W. Topp, Esq.	8	0	3	33	31·64	202
„ (Institution)	Mr. J. Martin	6	0	6	50 T	35·43	173
D BA Burghead (H.R.S.)	The Station Agent	5	1	1	18	27·37	167
Covesea Skerries	Bd. of Northern Lights	...	...		...	23·65	163
NAIRN.							
D BA Nairn (Academy Street)	J. H. Browne, Esq.	5	2	0	55 ⅄	27·17	197
BA „ (H.R.S.)	The Station Agent	5	1	0	60	26·24	...

DIVISION XVIII.—NORTH-WESTERN COUNTIES.

WEST ROSS.‡							
*Loch Alsh (Inverinate House)	Mrs. Matheson	5	2	0	10	88·13	...
D BA Strome Ferry (H.R.S.)	The Station Agent	5	1	0	40	72·03	237
D „ „ (Duncraig)	Mr. Lorraine	5	1	0	124 L	55·95	233
D BA Applecross Gardens	Mr. W. Whitelaw	5	0	9	70 ⅄	53·36	215
Strathconan	Mr. J. Watson	5	2	0	...	61·63	278
BA Gairloch (Auchtercairn)	Mr. K. Mackenzie	5	6	0	13	48·71	235
Loch Vraon	J. D. Baldry, Esq.	8	0	7	750	68·12	...
Lochbroom (Loch Drome)	„ „	8	0	7	850	74·47	...
Braemore House	„ „	8	0	7	750	69·23	...
„ Lodge	„ „	8	0	7	100	74·50	...
D BA *Lochbroom	Mr. M. Macleay	5	0	4	48	56·00	248
Isle of Lewis (Stornoway)	Bd. of Northern Lights	...	3	4	31?	30·44	160
D „ (Bernera)	Mr. J. Macdonald	6	1	0	200	50·55	202
„ (Butt of Lewis)	Bd. of Northern Lights	...	3	6	...	42·26	202

‡ Including Cromarty.

DIVISION XVIII.—NORTH-WESTERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell
			ft. in.	feet.	inches.	
EAST ROSS.‡						
D B A *Dingwall Academy	J. Boyd, Esq.	5	1 0	25 T	30·18	151
D B A ,, (H.R.S.)	The Station Agent	5	1 1	3	31·27	189
D B A Achanault (H.R.S.)	,, ,, ,,	5	1 0	...	54·95	245
Cromarty	Bd. of Northern Lights	...	3 4	28 ?	23·61	112
D *Invergordon Castle	B. B. Æ. McLeod, Esq.	5	1 0	20 ?	28·43	182
B A ,, (H.R.S.)	The Station Agent	5	1 0	18	27·73	...
Alness (Ardross Castle)	Mrs. Matheson	5	1 0	450 T	44·79	...
D B A *Tain (Fearn)	R. Gordon, Esq.	5	1 0	70	29·44	162
D ,, (Springfield)	Mr. McLardy	5	1 0	80 ⅄	29·84	179
Tarbetness	Bd. of Northern Lights	...	3 4	61 ?	24·64	150
WEST INVERNESS.						
D Kinlochmoidart	W. Robertson, Esq.	6	0 6	30 ?	61·30	107
Loch Sheil (Glenfinnan)	Major Macdonald	...	...	35 ?	112·17	...
Loch Nevis (Inverie)	Mr. N. Macdonald	5	2 6	14	73·70	132
D Glenquoich	Mr. G. Craig	8	4 8	665 ⅄	118·28	220
Isle of Skye (Oronsay)	Bd. of Northern Lights	...	0 6	15 ?	100·36	175
,, (Kyle Akin)	,, ,, ,,	...	0 2	3 ?	73·90	180
B A ,, (Sligachan).*monthly*	Mr. Butters	8	1 0	...	82·87	...
D B A* ,, (Portree)	Mr. J. Grant	5	1 3	165 ⅄	82·18	268
,, (Dunvegan)	Mr. R. Mackintosh	5	0 1	16	87·71	248
Rona	Bd. of Northern Lights	...	...	...	37·62	114
Barrahead	,, ,, ,,	...	3 0	640 ?	27·83	168
S. Uist (Ushenish)	,, ,, ,,	...	0 4	157 ?	47·84	215
,, (Manse)	A. Buchan, Esq.	...	...	...	23·70	...
N. Uist (Monach)	Bd. of Northern Lights	...	...	...	49·30	180
,, (Spanish, Loch Maddy)	C. Shaw, Esq.	...	...	...	66·85	...
Harris (Island Glass)	Bd. of Northern Lights	...	3 4	50 ?	42·93	148
EAST INVERNESS.						
D B A Dalwhinnie (H.R.S.)	The Station Agent	5	2 0	1450	46·94	208
B A *Laggan	Mr. A. McIntosh	5	0 9	821 ⅄	54·93	203
D B A Aviemore (H.R.S.)	The Station Agent	5	1 1	700	31·43	231
Strath Errick (Farraline House)	Capt. Fraser	3	1 0	700 B	36·90	...
D Glen Urquhart (Corrimony)	T. Ogilvy, Esq.	3	0 6	537 ⅄	43·00	...
D Glen Strathfarrer	Mr. D. Fraser	5	1 0	461 T	62·43	249
*Beauley (Beaufort Castle)	Mr. W. Anderson	5	1 0	50	45·68	208
D B A Dava (H.R.S.)	The Station Agent	5	1 2	...	31·67	224
D† Inverness (Culloden House)	A. Forbes, Esq.	7	3 0	82 T	28·38	223
D Cawdor [Nairn]	J. Joss, Esq.	5	1 0	260	33·87	203

‡ Including Cromarty.

DIVISION XIX.—NORTHERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell
			ft. in.	feet.	inches.	
SUTHERLAND.						
Dornoch (Ospisdale Ho.)	W. E. Cattley, Esq.	...	...	...	35·97	...
BA*Invershin	Mr. G. Young	5	4 0	20	41·12	...
Golspie (Dunrobin Castle)	Mr. D. Melville	3	0 3	6 T	34·17	...
D BA ,, (H.R.S.)	The Station Agent	5	1 0	27	34·85	166
Lairg	A. Buchan, Esq	3	...	458	44·33	...
D BA ,, (H.R.S.)	The Station Agent	5	...	...	44·12	...
D BA*Helmsdale	Mr. J. Campbell	5	1 0	34	37·88	229
Scourie	J. Simpson, Esq.	3	0 3	26 T	40·90	208
Cape Wrath	Bd. of Northern Lights	...	3 6	355 ?	41·72	153
CAITHNESS.						
Wick (Pulteney House)	Capt. Rutherford, R.N.	5	6 0	76	24·04	182
,, (Nosshead)	Bd. of Northern Lights	...	3 4	127 ?	28·47	201
Thurso (Holburnhead)	,, ,, ,,	...	0 4	60 ?	33·90	142
Dunnethead	,, ,, ,,	...	...	...	16·81	93
Pentland Skerries	,, ,, ,,	...	3 3	72 ?	25·50	147
ORKNEY.						
DS. Ronaldshay (Roeberry)	J. W. Gray, Esq.	5	1 2	150	34·77	233
Hoy (Cantickhead)	Bd. of Northern Lights	...	...	...	54·60	160
,, (Graemsay Sound, East)	,, ,, ,,	...	3 4	27 ?	37·72	183
†Pomona (Kirkwall)	Mr. J. G. Iverach	3	0 4	8 L	33·89	218
,, (Tankerness)	A. Buchan, Esq	5	...	...	33·88	...
Shapinsay (Balfour Castle)	Col. Balfour	4	0 6	50	29·30	...
D†Pomona (Sandwick)	Rev. C. Clouston, LL.D.	11	2 0	78	37·73	225
Stronsay (Auskerry)	Bd. of Northern Lights	...	...	...	31·05	127
Sanda (Start Point)	,, ,, ,,	11	0 6	29 ?	43·83	128
BA*Papa Westray	Rev. C. Clouston, LL.D.	5	...	80 ?	35·53	194
North Ronaldsay	Bd. of Northern Lights	...	3 4	21 ?	29·20	132
SHETLAND.						
Bressay Lighthouse	Bd. of Northern Lights	5	0 4	60	40·49	151
,, Manse	Rev. Dr. Hamilton	8	1 0	10	42·10	236
Stourhead	Bd. of Northern Lights	...	...	...	53·00	134

IRELAND.

DIVISION XX.—MUNSTER.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
CORK.						
Cork (Queen's College)	Professor England ...	10	6 0	65	33·99	...
,, (Royal Institution)	Dr. Caulfield	10	50 0	70	32·70	165
Fermoy (Gas Works)	G. Anderson, Esq.	5	...	...	35·68	...
,, (St. James' Place)	A. Campbell, Esq.	5	1 0	114 ⅄	33·10	254
D ,, (Glenville)	H. Hudson, Esq., M.D.	8	1 0	514 ⅄	44·63	255
KERRY.						
D BA Caherciveen (Darrynane Aby.)	D. O'Connell, Esq. ...	5	1 1	12 ⅄	57·04	259
Cara (Lake side)	J. B. Kennedy, Esq.	5	0 4	125 ⅄	48·34	...
D ,, (Glenbehy)	Mr. Hutchinson	5	4 0	40	57·82	228
WATERFORD.						
D Waterford (Newtown)	Mr. E. Garnett	9	4 6	60 ?	40·26	196
D ,, (Portlaw)	S. B. Pim, Esq.	24	25 0	50	39·24	162
,, (Gas Works)	G. Anderson, Esq.	5	...	...	35·03	...
TIPPERARY.						
D Clonmel (Glenam)	Miss Grubb	5	1 10	80 T	40·72	208
D Skinrone (Gurteen)	Miss Smith	5	...	267	38·76	240
Cloughjordan (The Deer Park)	H. B. Trench, Esq. ...	5	1 0	447	38·49	185
CLARE.						
D Killaloe	W. H. Mayne, Esq. ...	12	5 0	123 ⅄	52·73	221

DIVISION XXI.—LEINSTER.

WEXFORD.						
Wexford (Reclaimed Lands)	C. W. Palliser, Esq. ...	10	1 0	1 ⅄	33·50	125
D New Ross (Rosbercon Cas.)	A. E. Graves, Esq. ...	6	2 6	60 ⅄	39·28	156
,, (Longraigue)	J. Deane, Esq.	5	1 1	210	38·31	215
D Enniscorthy (Ballyhyland)	J. Moffat, Esq.	5	1 0	420 B	41·25	227
Gorey (Courtown)	Earl of Courtown	5	3 0	80 ?	29·50	154
KILKENNY.						
New Ross (Tullogher)	D. A. Milward, Esq.	5	1 0	500 ⅄	44·35	214
D Inistioge (Woodstock)	Rt. Hon. W. F. Tighe	5	4 6	400 T	40·28	170
BA* Stoneyford (Inisnag)	Rev. J. Graves	5	1 0	220 ⅄	32·57	...

DIVISION XXI.—LEINSTER—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1873	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
CARLOW.						
D Bagnalstown (Fenagh)	D.W.P. Beresford, Esq.	5	1 0	340 R	32·00	209
D Carlow (Browne's Hill)	R. C. Browne, Jun., Esq.	5	1 0	291 R	31·01	212
KING'S COUNTY.						
Birr Castle	R. Copeland, Esq.	8	0 8	183 T	36·05	209
D Portarlington	Dr. Hanlon	5	1 2	240 L	29·50	274
D Rathangan (Clonbrin)	Mrs. W. Gresson	5	1 3	224 T	30·94	204
Tullamore	H. J. B. Kane, Esq.	10	3 0	235	33·12	226
WICKLOW.						
Shillelagh (Coollattine Park)	Mr. Byrne	5	1 0	427	28·37	...
D Bray (Fassaroe)	E. Barrington, Esq.	10	5 0	250	27·74	185
DUBLIN.						
D Black Rock (Rockville)	T. Bewley, Esq.	12	29 0	95 R	24·96	103
D Monkstown (Easton Lodge)	Greenwood Pim, Esq.	3	0 6	90	23·01	159
D Dublin (Fitz William Square)	Dr. J. W. Moore	5	3 4	54 T	23·82	189
„ (Eccles St.)	H. A. Cosgrave, Esq.	5	3 4	70	26·13	206
„ (O. S. O. Phœnix Park)	Lieut. Rowe, R.E.	31	10 0	170 R	25·53	203
Glasnevin (Botanic Gardens)	D. Moore, Esq.	36	10 0	65 R	24·63	160
D Balbriggan (*daily*)	Rev. S. P. Warren	5	0 11	57 T	27·09	206
„ (*monthly*)	„ „ „	5	1 0	57 T	26·49	...
MEATH.						
D Clonee, (Williamstown)	W. Johnston, Esq.	5	1 0	200	26·35	193
WESTMEATH.						
Athlone (Twyford)	E. Hodson, Esq.	5	1 0	201 T	37·45	...
LOUTH.						
D Castle Bellingham (Drumcashel)	Mrs. Macan	8	1 3	225 T	27·96	195

DIVISION XXII.—CONNAUGHT.

GALWAY.						
D Gort (Cregg Park)	R. J. Lattey, Esq.	5	3 0	130 R	40·74	224
D Galway (Queen's College)	Prof. Curtis, LL.D.	16	8 2	30 R	48·08	228
D B A Ballinasloe	W. H. Kempster, Esq.	5	0 6	150 ?	42·09	240
Tuam (Gardenfield)	H. Kirwan, Esq.	5	6 0	136 T	36·52	...
ROSCOMMON.						
B A * Holywell	H. Smyth, Esq.	5	5 6	...	29·75	143
MAYO.						
Hollymount (Cloona Castle)	J. Simson, Esq.	4	1 0	100	44·20	...
SLIGO.						
B A * Buninnadden (Doo Castle)	Mr. D. O'Dowd	5	1 0	...	34·29	...
Collooney (Markree Observatory)	Col. Cooper	24	16 3	145	33·40	220
„ „ „	„ „	5	0 6	130	36·67	...
D Sligo (Mount Shannon)	F. M. Olpherts, Esq.	5	4 5	70 B	38·58	201

DIVISION XXIII.—ULSTER.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level	Depth of Rain. 1873	Days on which .01 or more fell.
					feet.	inches.	
CAVAN.							
D *Belturbet (Red Hills)	Rev. E. Whyte Venables	5	0	9	208 ⅄	31·61	218
FERMANAGH.							
Enniskillen (Florence Court)	Earl of Enniskillen F.R.S	8	1	9	250	40·26	183
ARMAGH.							
D Armagh Observatory	Rev. Dr. Robinson F.R.S	10	1	7	208 ⅄	26·68	188
DOWN.							
D Seaforde	Colonel Forde	8	0	5	180 ⅄	29·76	193
Milltown (Bann Res)	J. Smyth, Esq. C.E.	8	1	0	440 T	31·20	97
Banbridge (Milltown)	,, ,, ,,	8	0	8	200 T	27·70	224
D ,, ,, (*monthly*)	,, ,, ,,	12	10	0	220 T	23·59	...
D Waringstown	Major Waring	8	0	4	190 ⅄	29·33	193
D Sydenham (Alma House)	R. Reade, Esq.	5	1	1	60	36·54	243
ANTRIM.							
D Aghalee [Lurgan]	Lancelot Turtle, Esq.	5	1	0	105 ⅄	31·94	178
,, [,,] (*monthly*)	,, ,,	9	1	0	105	31·38	...
D †Belfast (Queen's College)	Mr. W. Taylor	11	7	4	68 ⅄	31·13	180
,, (Old Park)	W. Girdwood, Esq.	6	4	0	224 ⅄	35·95	194
,, (Antrim Rd.)	G. Thompson, Esq.	2	7	0	144	26·41	161
BA *Antrim (The Manse)	Rev. J. H. Orr	5	1	0	150 ⅄	32·06	173
LONDONDERRY.							
D *Garvagh (Moneydig)	H. R. Morrison, Esq.	5	1	0	121 T	35·96	196
Londonderry	D. Watt, Esq.	8	0	6	80	40·07	...
Bellarena	Sir F. Heygate, Bt.	5	1	0	12 T	36·83	215
TYRONE.							
D Omagh (Edenfell)	Major Buchanan	8	1	0	275	34·88	236
DONEGAL.							
Raphoe (Convoy)	Major Montgomery	5	1	0	100	39·91	227
,, ,,	,, ,,	5	4	0	100	36·38	226
Dunglow (Templecrone)	Rev. A. Delap	8	0	6	10	47·21	241
BA Ramelton	J. A. Mahony, Esq.	5	1	2	21	40·71	234
D ,, (Ballyare)	G. M. W. Hill, Esq.	5	1	0	60	39·34	205
D Moville	Rev. F. Smith	12	4	0	100 ⅄	42·19	238

G. J. S.

FINANCIAL.

I am very glad to be able to report that the unprecedentedly heavy expenses of 1873, were met by increased subscriptions, and by a larger sale of the annual volume. It is also satisfactory to notice that although death has of late removed several liberal supporters, so many others have come forward that the following list is one of the longest yet given. I think it is legitimate to infer from the support extended to this undertaking, that my countrymen recognize it as a work of national utility, which must not be suffered to be impeded for the want of the few hundreds per annum which, under present arrangements, suffice for its maintenance. As to the efficiency of the organization, it would be inappropriate for me to write; but it may be permissible to refer to the very flattering notice in the current number of the *Edinburgh Review*, especially as my observers and subscribers are fully entitled to share in the praise there bestowed. Long may we continue to deserve it, by all in their several spheres yearly trying to do more, and better, than before.

List of all Sums of £1 *and upwards received in payment for Books, Diagrams. &c., or as Contributions to the General Expenses of Rainfall Investigations in* 1874.

	£	s.	d.
Abbotts, R. W., Esq.	1	10	0
Adams, Rev. E. A.	1	0	0
Ainsworth, Major D.	1	0	0
Aire and Calder Navigation ...	2	7	6
Alexander, J., Esq.	1	0	0
Allison, R. A., Esq.	1	13	0
Ames, E. L., Esq.	1	0	0
Andersson, A. R., Esq.	1	0	0
Appach, R., Esq.	1	0	0
Assheton, R., Esq., M.P.	1	0	0
Atkinson, A., Esq.	1	1	0
Backhouse, T. W., Esq.	1	0	0
,, W. A, Esq.	1	0	0
Baker, W. C., Esq.	1	1	0
Balme, E. B. W., Esq.	2	12	0
Barber, J. T., Esq.	2	2	0
Barrington, E., Esq.	1	0	0
Barter, C. S., Esq., M.D.	1	18	6
Baxendale, J., Esq.	1	13	0
Bayning, The Lady	1	0	0
Bell, T., Esq., F.R.S.	1	1	0
Bellamy, G. D., Esq.	1	11	0
Berens, Miss (2 years)	2	2	0
Bicknell, P., Esq.,	3	0	0
Biddell, G. A., Esq.	1	1	0
Birkbeck, W., Esq.	1	0	0

	£	s.	d.
Blackburn, J. W., Esq., C.E...	1	11	0
Blake, W., Esq.	2	0	0
Blamire, Rev. W. H.	1	5	0
Blomfield, Rev. L.	1	0	0
Bolckow, H. W. F., Esq., M.P.	1	15	0
Bosanquet, S., Esq.....	1	0	0
Box, A. M., Esq.....	1	1	0
Boyd, Rev. W.....	1	1	0
Bravender, J., Esq.....	1	5	0
Bridgeman, Hon.&Rev. J.R.O.	1	1	0
Bridson, H., Esq.....	1	5	0
Brooke, The Rev. J.....	1	5	0
Brown, A. J. D., Esq.....	1	0	0
Buchanan, Major	1	0	0
Bumpstead, The Rev. T. J.....	1	0	0
Burder, G. F., Esq., M.D.....	1	0	0
Burgess Wilson, Mrs.	1	1	0
Burlingham, R., Esq.	1	12	0
Burra, J. S., Esq.....	1	10	0
Bushell, R., Esq.	2	0	0
Campbell, A., Esq.....	1	1	0
,, Colin, Esq.	1	0	0
Carmichael, P., Esq.	1	0	0
Cator, C. O. F., Esq.....	1	10	0
Chapman, E. Esq.....	1	11	0
Chrimes, R., Esq.....	10	0	0
Christopherson, Rev. A.	1	0	0
Clark, C., Esq.	1	0	0
Clegram, W. B., Esq., C.E. ...	1	10	0
Collins, C. R., Esq.	1	13	0
Coode, E , Esq.	1	3	0
,, W., Esq.....	1	7	6
Cooke, The Rev. R. B.....	1	0	0
,, J. H., Esq.	1	10	0
Courtauld, S., Esq.	1	1	0
Courtown, Rt. Hon. Earl of ...	1	5	0
Crowley, P., Esq.	1	12	0
Darby, C., Esq.....	2	0	0
Davey, E. C., Esq.	1	0	0
Davies, Rev. R. P.	1	1	0
Davis, H., Esq.....	1	0	0
,, T. H., Esq.....	1	1	0
Denne, W., Esq.	1	1	0
Dickinson, Messrs., & Co.....	1	5	0
Dines, G., Esq.	1	10	0
Dipple, G., Esq.	1	0	0
Divett, J., Esq.	1	0	0
Dod, Whitehall, Esq.	2	0	0
Doncaster, D., Esq., Jun.	1	0	0
Douglas, S., Esq.	1	0	0
Drake, Rev. R.	1	5	0
Drummond, General.....	2	0	0
Du'Port, Rev. J. M.	1	0	0
Dyke, T. J., Esq.	1	1	0
Dymond, E. E., Esq.	1	1	0
Eaton, H. S., Esq.	1	0	0
Erskine, Sir T., Bart.	1	10	0
Estlin, Capt.	1	11	6
Evans, F. G., Esq.	1	10	0
Eyre, Rev. W. L. W.	1	1	0
Fawcett, E. G., Esq	1	0	0
Fenwick, T., Esq., C.E.	1	5	0
Ffolkes, The Rev. H.	1	0	0
Field, Rogers, Esq., C.E.	1	12	0
Filliter, E., Esq., C.E.....	1	12	0
Forde, Colonel	2	5	0
Foster, R., Esq	1	5	0
Gainsford, W. D., Esq.	1	8	0
Gamlen, W. H., Esq.	1	1	0
Garnett, W., Esq.....	5	0	0
Gavin, J. Esq.	1	3	0
Giles, J., Esq.....	1	6	0
Gill, H. Septimus, Esq.	1	1	0
Gillow, Rev. Dr.	1	0	0
Graves, Rev. J.....	1	0	0
Grey, Admiral Hon. Sir F. W.	1	10	0
,, Right Hon. Earl, K.G...	1	0	0
Griffith, Capt.....	1	0	0
Grubb, Miss	1	0	0
Gulson, J., Esq.....	1	6	0
Hankinson, R. C., Esq.....	1	6	0
Harcourt, Col.	1	0	0
Harris, W. J., Esq.	2	15	0
Harrison, Mr. A.	1	0	0
,, W. F., Esq.	2	0	0
Haywood, W., Esq., C.E.	1	1	0
Healey, G., Esq.	1	5	0
Heberden, Rev. W.	1	0	0
Herbert, J. M., Esq.....	1	1	0
Heywood, A. H., Esq.....	1	7	0
Hill, The Rev. E.....	1	7	6
,, J. H., Esq.....	2	0	0
Holdsworth, J. S., Esq.	1	10	0
Hopkins, Rev. T.	1	15	6
Horner, Rev. J.....	2	0	0
Horncastle, H., Esq.	1	0	0
Howard, W. D. Esq.	10	10	0
Howman, The Rev. E. J.....	2	12	0
Hubbard, Egerton, Esq. M.P...	2	10	0
Hudson, H., Esq., M.D.	3	0	0
Hull, The Rev. J.....	1	0	0
Hutchinson, A., Esq.	1	0	0
James, T., Esq.....	1	0	6
Jefferson, Miss M. C. D.....	1	0	0
Jones, Mrs.....	1	1	0
Jowers, F. W. E., Esq.	1	10	0
Karslake, The Rev. W. H.....	1	1	0
Ker, R., Esq.....	1	1	0
King, S.. Esq.	1	0	0
Knott, J., Esq.	1	1	0
Knowles, J., Esq.....	1	0	0
Langton, S. Z., Esq.....	1	0	0
Leach, J., Esq.	1	0	0
Leather, J. T., Esq., C.E.	2	0	0
Lighton, Rev. Sir C., Bart. ...	1	0	0
Lippincott, R. C. C., Esq.	1	0	0
Lloyd, R. Lewis, Esq.	1	11	0
Lockhart, A. E., Esq.	1	0	0
Lucas, W., Esq.....	2	0	0
Lund, C., Esq.	1	0	0
Macfie, R., Esq.	1	0	0
Mackeson, H. B., Esq.....	1	10	0
McLean, J. Howard, Esq.	1	10	0
Majendie, L. A., Esq. (3 years)	2	0	0

	£	s.	d.
Malden, The Rev. C.	1	5	0
Marshall, A., Esq.	4	4	0
,, H. C., Esq.	4	12	6
Marten, J., Esq.	1	8	6
Massie, R., Esq.	1	5	0
Matthews, J., Esq.	1	1	0
Maxwell, Rev. E.	1	12	0
Melville, A. S. L., Esq.	1	1	0
Mitchell, F. J., Esq.	1	1	0
Muirhead, H., Esq., M.D.	1	0	0
Murdoch, Rev. J. B	1	0	0
Musgrave, W., Esq.	1	1	0
Nash, W. D., Esq.	1	1	0
Neumann, H., Esq.	1	5	0
Newdigate, Rev. C.	1	0	0
Newnham, Rev. P. H.	1	1	0
North, A., Esq.	1	1	0
Northwick, Rt. Hon. Lord (2 yrs.)	2	0	0
Nutter, J., Esq.	1	1	0
Ogilvy, T., Esq.	1	1	0
Orde, Sir J. P., Bart.	2	1	0
Parkin, A., Esq.	1	5	0
Parnell, J., Esq.	1	5	0
Pasley, Admiral Sir T. S., Bt.	2	11	0
Paulin, T., Esq.	2	15	0
Paxton, H., Esq.	1	0	0
Payne, G. Jun., Esq. (2 years)	2	2	0
Peake, H. B., Esq.	1	1	0
Peckover, A., Esq.	1	1	0
Pennant, P. P., Esq.	1	1	0
Penrose, W. H., Esq.	1	1	0
Perry, Rev. S. J.	1	5	0
Piggott, G., Esq.	1	0	0
Plant, T. L., Esq.	1	1	0
Pleydell, J. C. Mansel, Esq.	1	0	0
Powell, T. H., Esq.	1	1	0
Preston, The Rev. T. A.	3	0	0
Prince, C. L., Esq.	1	1	0
Radcliffe, T., Esq.	1	1	0
Radford, Dr.	1	12	0
Ramsden, J. E., Esq.	1	1	0
Redford, R., Esq.	1	0	0
Rendell, Rev. A. M.	1	0	0
Reynolds, L. W., Esq.	1	10	0
Robson, J., Esq.	1	0	0
,, J. W., Esq.	2	0	0
Rylands, T. G., Esq.	1	1	0
Schneider, H. W., Esq.	3	13	0
Sconce, A., Esq.	1	10	0
Scott, W., Esq.	1	1	0
Sharples, G., Esq.	1	0	0
Silver, S. W., Esq.	2	2	0
Shiffner, Miss I.	1	0	0
Slinn, W. S., Esq.	1	0	0
Smith, J., Esq.	2	2	0
Smyth, J., Jun., C.E.	1	0	0
Snow, The Rev. H.	2	0	0
Soames, Rev. C.	1	0	0
Southall, E. P., Esq.	1	6	6
,, H., Esq.	1	0	0
Spence, R., Esq.	1	1	0
Squire, W., Esq.	1	0	0
Stokes, H., Esq.	1	0	0
Stone, W. H., Esq.	1	10	0
Stow, Rev. F. W.	1	0	0
Strahan, W., Esq.	1	0	0
Taylor, F., Esq.	1	0	0
,, J., Esq.	1	1	0
Tighe, Right Hon W. F.	1	0	0
Tippinge, F. G., Esq.	1	1	0
Trench, H. B., Esq.	2	0	6
Trimleston, The Rt. Hon. Lord	1	0	0
Truscott, C., Jun., Esq.	1	11	0
Tucker, H., Esq.	1	0	0
Tuckett, F. F., Esq.	1	5	0
W., M. F.	5	0	0
Wallis, J., Esq.	1	0	0
Ward, Dr.	1	1	0
,, H., Esq.	1	11	0
Waring, Major	1	10	0
Warren, G., Esq.	2	1	0
Watkins, J., Esq.	2	12	0
West, F., Esq.	1	1	0
Westall, E., Esq., M.D.	1	1	0
Weston, Rev. G. F.	1	0	0
Whitbread, S. C., Esq.	1	0	0
White, J., Esq.	1	0	0
Whitehouse, W. O., Esq. (2 yrs.)	2	2	0
Wigram, J. R., Esq.	1	0	0
Wilson, J. J., Esq.	1	0	0
,, Thomas, Esq	1	5	0
Wingfield, the Rev. C. L.	1	1	0
Winter, Rev. E. W.	1	0	0
Wood, Alfred, Esq., M.D. (2 yrs.)	1	1	0
,, J. G., Esq.	1	0	0
Wortham, H., Esq.	1	10	0

[Subsequent receipts will be acknowledged monthly in the *Meteorological Magazine*. Cheques should be crossed National Bank, and Post Office Orders drawn on Camden Road.]

SUPPLEMENTARY TABLE OF IMPERFECT RETURNS.

This table contains records not absolutely perfect, but so nearly so that it appears undesirable to omit them altogether, the causes which preclude their insertion in the General Tables are very various, and need not be mentioned, as it must be distinctly understood that they merely represent the total rainfall for the whole year as accurately as the Observer and Editor can determine it.

DIV.	COUNTY.	STATION.	OBSERVER.	Rain Gauge. Diameter.	Height Above Ground ft.	Height Above Ground in.	Height Above Sea Level feet.	Depth of Rain. 1873 inches.
II.	Kent	Maidstone, Boxley Road	J. N. Case, Esq.	5	1	0	180	21·50
		,, East Farleigh		5	1	0	140	
,,	,,	Maidstone, Preston Hall	Mr. W. Bradley	8	1	0	60 ?	23·98
,,	Sussex	Beachy Head	Miss W. L. Hall	5	1	0	510 B	22·18
,,	Hampshire	Litchfield Rectory	Rev. H. B. Heberden	5	0	9	...	26·19
IV.	Norfolk	Hardingham	Rev. J. M. Du Port	...	...		...	23·54
V.	Devon	Lupton, Brixham	Mr. Erskine / Mr. I. Gibson	12	4	0	...	37·56
,,	,,	Widdecombe Vicarage	Rev. J. Williams	5	8	0	810 B	49·21
				5	1	0	803	
,,	,,	South Molton	E. Wales Johnson, Esq.	5	1	0	443	43·40
		,, ,, (East Street)	N. Hatherly, Esq.	5	1	0	430	
,,	Cornwall	Wadebridge, Treharrock	H. A. Hambly, Esq.	5	3	0	302	24·05
		,, Park Villa		5	3	0	277	
VI.	Worcester	Selly Hall	Rev. E. W. Winter	8	1	6	...	27·14
,,	Warwick	Leamington, Brereton	G. H. M. Whish, Esq.	5	1	6	202	23·78
VII.	Lincoln	Ferriby Sluice	Rev. J. E. Cross	5	0	9	10	20·52
,,	Nottingham	Nottingham, Newstead Grove	M. O. Tarbottom, Esq.	8	0	5	238	20·51
		,, The Park		8	1	0	183 B	

SUPPLEMENTARY TABLE OF RETURNS—(*continued*).

VIII.	Cheshire	Northwich, Highfields	.....	...	...	...		26·18
„	Lancashire	Liverpool (Richmond Park)	G. H. King, Esq.	...	...	...		29·77
		„ (Allerton, Greenhill)		...	...	...		
„	„	Oldham Gas Works	H. Andrew, Esq.....	9	4 0	600 T		33·59
				5	4 0	600 T		
„	„	Oldham, Brushes Clough	H. Andrew, Esq.	10	4 0	950 T		38·42
				5	4 0	950 T		
„	„	Silverdale, Cove Lea	Rev. C. C. W. Shepheard	5	1 0	65		38·59
		„ Cove House		5	1 0	56		
„	„	Brathay Hall	G. Redmayne, Esq.....	6	1 5	136		81·33
IX.	Yorkshire	Strines Dale, [Oldham]	H. Andrew, Esq.....	10	4 0	800 T		30·66
				5	4 0	800 T		
„	„	Scissett	A. M. Box, Esq.	3	0 3	475 T		17·94
X.	Cumberland	Broughton Grange	G. S. Wilson, Esq.	5	1 3	203 M		37·28
XI.	Montgomery.....	Dylife	The late Mr. I. Jones	8	1 0	1300 T		66·56
„	„	Llanwyddyn	Mr. Gittins	8	0 8	1740 T		65·83
XII.	Dumfries	Upper Cassock.....	J. C. Little, Esq.	3	0 6	900 M		56·80
XVIII.	Inverness	Inverness (H.R.S.)	The Station Agent	5	...	...		27·59
XXIII.	Donegal	Letterkenny, Sprackburn	Dr. Ashe	5	1 6	75		47·73
		„ The Glebe.....	Dr. H. Kingsmill	...	...	...		

List of Stations of which the Records were quoted in 1872, *but are not in* 1873, *with the reasons for their omission.*

EXPLANATION.—The Stations are quoted in the order of their sequence in the printed tables, and the causes of omission are indicated as follows :—

NR—No reply; NO—Not observed; T—Terminated; RI—Return imperfect.

Ealing	RI	Burton	NR	Scawfell	NR
Chiswell Street	NR	Newton Ferrers	NR	Esk Hause	NR
Roslyn House	RI	Chagford	T	Great End	NR
Dunsfold	NR	Carclew	RI	Wastdale	NR
Cranleigh	NR	Truro, *Old Gauge*	T	Brant Rigg	NR
Gomshall	RI	Poughill Vicarage	NR	Sprinkling Tarn	NR
Godstone	NR	Bath, Gay Street	T	Stye Head Tarn	NR
Caterham	NO	Bathampton Lodge	T	The Stye	NR
Croydon Park Lane	NR	Huntley, the Cottage	T	Taylors' Gill	NR
,, Woburn Road	NO	Kington	T	Helvellyn, Birkside	NR
Coombe Bank	NR	Dudmaston Hall	NR	Park End, Workington	T
Westerham	T	Meole Brace	T	Cockermouth (*on a post*)	T
Eltham Green (Field)	T	Waterloo Road	T	Ambleside, Low Nook	T
Findon	NR	Rugeley	T	Chepstow	T
Bepton Hill	T	Keele	NR	Monmouth	NR
Beachy Head (No. 2)	RI	Owston	T	Chirk	NR
Buckingham Place (roof)	T	Barrowden	RI	Festiniog	RI
Eaton Place	NR	Bargate Lodge	T	Plas Brereton	T
W.W. Goldstone Bottom	NR	Kingston Hall	NR	Calf of Man	RI
Cuckfield	NR	Highfield House	NR	Point of Ayre	RI
Niton	NR	Annesley	NR	Scilly, St. Mary's	T
Carisbrooke Castle	NR	Southwell	T	Guernsey, L'Hyvreuse	T
Portsea	RI	Sudbury Gardens	NR	Stranraer, South Cairn	T
Basingstoke	NR	Brampton	RI	Hawick Langraw	T
,, Chapel Hill, *Mon.*	NR	Wrenbury	NR	,, Lynnwood	NR
Hartley Grange	NR	Lyme Park	NR	Fenton Barns	T
Thamesfield	T	Atherton Terrace	T	Leith	NR
Harpenden, the Sycamores	T	Backbarrow	T	Evan Waterfoot	NR
Stevenage O. Court	NR	Skipton Grammar School	T	Meadowbank	NR
Datchet	NR	Coney Street	NR	Coatbridge, Woodside	T
Banbury, Parson Street	NR	Hull, Clare House	T	Cumnock, Dumfries Ho.	T
Newbottle	NR	Thirsk	RI	Ardrossan	NR
East Tilbury	T	Appleton-le-Street	NR	Netherplace	NO
Rochford	T	Richmond, Aske	NR	Compensation Res	NR
Thorndon Hall	NR	Barningham Park	NR	Shiel Hill	RI
Colchester, the Camp	NR	Port Mulgrave	NR	Greenock, Hamilton-st	T
Wimbish	T	Southend	NR	Cairndow	RI
Gillingham Hall	NR	Brinkburn	NR	Oban Manor House	RI
Hockering	RI	Heugh Light House	NR	Rhu Vaal	RI
Egmere	T	St. John's	NO	Dollar	RI
Bower Chalk	NR	Stanhope Castle	NR	Stronvar	NR
Monkton Farleigh	RI	Seaham Hall	RI	Blairgowrie, Rosemount	NR
Lacock	T	Hexham	NR	Seafield Cottage	T
Dorchester	T	Bellingham	NR	Cappoquin	NR
Maiden Newton	T	Deanhead	NO	Curraghmore	NR
Watcombe	NR	Rothbury	NR	White Abbey	NR
Blandford	T	Byrness	NR	Scotch Quarter	NR